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IN THE

Supreme Court of the United States

OCTOBER TERM, 1977

No.

M/V TAMANO, WILHELM WILHELMSSEN, and
CAPT. THORLIEF BJONNES,

Petitioners,

versus

UNITED STATES OF AMERICA,

Respondent.

**PETITION FOR A WRIT OF CERTIORARI TO THE
UNITED STATES COURT OF APPEALS
FOR THE FIRST CIRCUIT**

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Respondent.

**PETITION FOR A WRIT OF CERTIORARI TO THE
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FOR THE FIRST CIRCUIT**

Petitioners pray that a Writ of Certiorari issue to review the judgment of the United States Court of Appeals for the First Circuit entered on the 24th day of August, 1977, reversing the judgment of the United States District Court for the District of Maine, Southern Division, entered on the 3rd day of October, 1975.

Opinion Below

The opinion of the United States District Court for the District of Maine, Southern Division, attached hereto as

Appendix A, is reported at 1975 AMC 2174 and is not otherwise reported.

The opinion of the United States Court of Appeals for the First Circuit, attached hereto as Appendix B, is not yet reported. The Opinion and Order of the Court of Appeals for the First Circuit denying Petitioners' request for a rehearing, attached hereto as Appendix C, is not yet reported.

Jurisdiction

The judgment of the United States Court of Appeals for the First Circuit was entered on August 24, 1977. The Mandate of the Court of Appeals was stayed pursuant to F.R.A.P. Rule 41, 28 U.S.C.A., by virtue of the filing of a Petition for Rehearing. A Petition for Rehearing was filed on September 20, 1977, after an enlargement of time was granted by the Court of Appeals for good cause shown. The Petition for Rehearing was denied on October 4, 1977. Jurisdiction of this Court is invoked pursuant to 28 U.S.C.A. §1254(1).

Questions Presented

1. Whether the Court of Appeals erred in its finding that Pilot Dunbar was not a third party under 33 U.S.C.A. §1321(f)(1) and §1321(i)(1).
2. Whether the Court of Appeals, in creating new facts and in reversing findings of fact and the decision of the

District Court, departed from prior decisions of this Court and abused its power of appellate review.

Statutes, Rules Involved

The relevant provisions of the Water Quality Improvement Act, 33 U.S.C.A. §§1321(f)(1) and (i)(1), and Fed. Rules Civ. Proc. rule 52(a), 28 U.S.C.A., are set forth in Appendix D.

Statement of the Case

This matter involves a Norwegian supertanker, TAMANO, which struck the westerly tip of Soldier Ledge on July 22, 1972, while passing through Hussey Sound in Casco Bay en route from Puerta la Cruz to the tanker anchorage area in Casco Bay. A large spill of #6 oil into the Bay occurred, with damage and cleanup expense claims in excess of \$4,000,000. Jurisdiction of the District Court was invoked under the terms and provisions of the Suits in Admiralty Act, 46 U.S.C.A. §741, et seq., and/or the Public Vessels Act, 46 U.S.C.A. §781, et seq., and/or the Extension of Admiralty Act, 46 U.S.C.A. §740.

TAMANO was a single screw motorship, 810 feet long, with a beam of 128 feet and was drawing 44 feet. She picked up her pilot, Captain Dunbar, off Portland Lightship at approximately 2335 on July 21 and with the pilot in charge of her navigation, proceeded in to the entrance to Hussey Sound, which is a narrow but deep "gut" approximately two miles long running from sea into the inner bay and the oil transfer area. The gut was marked by three large lighted buoys, Buoy 3, Buoy 6 (guarding Soldier

Ledge), and Buoy 7. The pilot had only these three aids to rely on (C.A., pp. 67a, 68a),¹ there being no ranges or permanent aids available. On July 20, COWSLIP, manned by a grossly incompetent and inexperienced crew (C.A., p. 48a, fn. 1), was engaged in servicing and renumbering these aids. In the process, Buoys 3 and 7 were reset off station (D.C., p. 13a),² and the position of Buoy 6 not verified (C.A., pp. 47a-48a). The Coast Guard called the Pilots office on July 21 only a few hours before Pilot Dunbar left to board TAMANO and advised that all three aids were on station (C.A., p. 46a).

In the early morning of July 22, TAMANO entered the gut leaving Buoy 3 to starboard and proceeded on a course of approximately 310° toward Buoy 6 and Buoy 7, it being the pilot's intention in accordance with the custom of the Hussey Sound pilots to hold this heading until the angle between Buoys 6 and 7, as observed from the ship's bridge, opened up and reached a certain relative position, which would trigger the start of his starboard turn (D.C., p. 8a, fn. 10) to pass between the buoys, but close to Buoy 6 on into the inner bay. At this time, TAMANO's bridge was manned by Captain Bjornes, Third Mate Storheil, Quartermaster Naess, Pilot Dunbar and Rider Pilot Ferguson. Bosun Hanssen was on the forecastle getting the anchor ready for anchoring when the ship reached the tanker anchorage area. After TAMANO had been on the 310° course for three or four minutes, Pilot Dunbar had a "funny feeling" that something was wrong because Buoys 6 and 7

¹ "C.A." refers to the Opinion of the Court of Appeals, attached hereto as Appendix B.

² "D.C." refers to the Opinion of the District Court, attached hereto as Appendix A.

seemed to be opening up prematurely (C.A., p. 46a). He held on for approximately five seconds after the relative position of the two buoys told him to turn and then commenced his turn to starboard, keeping Buoy 6 fine on his starboard bow (D.C., p. 9a). It was customary for a pilot when entering Hussey Sound on an ebb tide to hug Buoy 6 to avoid grounding on Peaks Island (D.C., p. 9a, fn. 12). As the ship neared Buoy 6, the buoy disappeared under the flare of the bow and reappeared a few feet off the starboard shoulder where the bridge crew watched it pass clear of the ship. Everyone on the bridge thought that the ship had passed clear of the buoy without hitting it (C.A., p. 74a) and the pilot and rider pilot both observed the buoy from the bridge wing, estimating it was from 20 to 30 feet and from 15 to 25 feet respectively off the bridge when abeam (A., pp. 359, 572),³ while the master estimated 2 to 4 fathoms (C.A., p. 62a; A., p. 207; E., p. 320).⁴ The third mate, who made his estimate from near the center of the pilothouse, in a bad position to see the buoy, estimated one meter (A., p. 266; E., p. 327) when the buoy was amidships, but did not estimate the distance when the buoy was off the stern. No one on the bridge realized the ship had grazed the westerly edge of Soldier Ledge until oil was observed on the water near the bow during anchoring (C.A., p. 47a).

Bosun Hanssen was alone on the forecastle until Chief Mate Steinsvaag came forward about ten minutes after

³ "A." refers to the three-volume Appendix in the Court of Appeals, certified by the Clerk of the Court of Appeals and filed with the Clerk of the Supreme Court.

⁴ "E." refers to the two-volume Appendix of Exhibits in the Court of Appeals, certified by the Clerk of the Court of Appeals and filed with the Clerk of the Supreme Court.

they passed Buoy 6. Hanssen said that he first saw Buoy 6 30 to 40 meters from the ship, far enough to starboard so that he first thought the ship would clear the buoy (C.A., pp. 48a-49a), but that the buoy hit the ship under the anchor 39 feet inboard from the starboard side. The buoy in fact suffered only minimal damage (D.C., pp. 19a-20a).

Diver Pastore dove on the sinkers of all three buoys a few days after the passage and found the sinker of Buoy 6 upside down, three wraps of chain around it, and a cut-off 1½" steel cable entwined with the sinker and chain (A., p. 513). He observed the bottom for a 20' radius around the sinker and found small stones, 1"-4" in diameter, over a mud and sand bottom with no evidence of disturbance on the bottom to indicate the 8500-lb. sinker had recently moved (A., p. 513; D.C., pp. 14a-15a). He further found undisturbed heavy marine growth on the 80' upper portion of the chain and on the underwater part of Buoy 6 (A., p. 512; D.C., p. 14a).

Surveyor Wright, hired by the ship to establish the positions of the sinkers of Buoys 3, 6 and 7 by triangulation from three shore points, found that Buoy 3's sinker was off station 130' to the northeast, Buoy 6's sinker 215' to the southeast, and Buoy 7's sinker 175' to the northwest. United States stipulated to the correctness of the Wright survey as to the time it was made and further stipulated that the sinkers of the three buoys could not have been moved by any storm or other natural condition between July 20 and the date of the survey (D.C., p. 22a). The United States maintained that if the sinker of Buoy 6 was moved, it was moved by the TAMANO (A., p. 769).

After a long and bitterly contested trial on liability, at which approximately 32 witnesses testified in person, in-

cluding many experts, and, pursuant to stipulation by all counsel, after the Judge rode on two tankers similar in size to TAMANO, one going through Hussey Sound at night and the second entering through Portland Head at night, and after the Judge observed the pulling up and resetting of Buoy 6's sinker by the Cutter SPAR, the District Court found that the sole proximate cause of the grounding and resultant damage was the negligence of the Coast Guard in failing to maintain Buoys 3, 6 and 7 in their charted positions.

The Court of Appeals reversed by overturning virtually every significant factual finding of the District Court, holding that the responsibility for the accident was the negligence of the Pilot, Dunbar.

ARGUMENT

A. The Court of Appeals Incorrectly Concluded That Pilot Dunbar Was Not a Third Party Under 33 U.S.C.A. §1321(f)(1) and §1321(i)(1).

Contrary to the District Court which found the United States solely at fault for the stranding of TAMANO, the Court of Appeals found Pilot Dunbar solely at fault. In addition, the Court of Appeals found Pilot Dunbar not to be a third party under 33 U.S.C.A. §§1321(i)(1) and (f)(1).⁵ Under the provisions of 33 U.S.C.A. §1321(i)(1), if the pilot was a third party and the discharge was caused either solely by his act or omission, whether negligent or not, or by a combination of negligence on the part of the

⁵ Formerly 33 U.S.C.A. §1161(i)(1) and 33 U.S.C.A. §1161(f)(1).

United States and an act or omission of the pilot, whether negligent or not, TAMANO owners would be entitled to recover the entire amount of approximately \$2,000,000 that they expended for cleanup expenses from the Pollution Fund established in 33 U.S.C.A. §1321(k). Similarly, under the provisions of 33 U.S.C.A. §1321(f)(1), a determination of whether the pilot was a third party is crucial in establishing whether the United States is entitled to recoup from TAMANO the cost of its cleanup expenses claimed to be in excess of \$500,000.

The question of whether the pilot was a third party under the aforementioned statutory sections is one of first impression which has not been, but, because of its obvious national and international significance to the shipping community and its insurers, should be settled by this Court.

33 U.S.C.A. §1121(f)(1) imposes strict liability upon vessel owners in derogation of the common law and thus should be strictly construed. *Herd & Co. v. Krawill Machinery Corp.*, 359 U.S. 297 (1959). The legislative history of the provision suggests that Congress did not intend to make a vessel owner responsible for the acts of a pilot and, thus, that the Court of Appeals was in error in its decision. As a trade-off for the imposition of strict liability upon a vessel owner, the Conference Committee deleted language in the original Senate and House versions of the bills which would have made a vessel owner responsible for a discharge caused by the willfulness or negligence of any person concerned with navigation of the vessel and substituted strict liability, subject to the "third party" exception and the other three exceptions stated in the provision. H.R. Rep. No. 127, 91st Cong., 1st Sess. (1969), reprinted in [1970] U. S. Code Cong. & Ad. News, p. 2691; S. Rep. No. 351, 91st

Cong., 1st Sess. (1969). See also 115 Cong. Rec., 28954-5 (1969) (remarks of Senator Muskie); 116 Cong. Rec. 8983 (1970) (remarks upon voting to adopt Conference Committee Report).

This Court should grant the Petition to clarify the definition of third party.

B. The Court of Appeals Improperly Substituted Its Judgment, Reweighed the Credibility of Witnesses and Created New Facts Unsupported by or in Conflict With the Record in Order to Support Its Reversal of the District Court.

Supreme Court Rule 19⁶ recognizes the Court's responsibility to review decisions which appear to have "... so far departed from the accepted and usual course of judicial proceedings ... as to call for an exercise of this Court's power of supervision." While this Court may be reluctant to exercise its discretion in the area of improper factual reversals, there are cases, as here, in which a Court of Appeals will so far abrogate standards of judicial review that this Court is obligated to review and reverse to preserve basic appellate standards.

A reading of the District Court's and Court of Appeals' decisions in conjunction with each other, totally absent a review of the record, immediately confirms that one of the two courts completely misapprehended the case. The differences between the two courts may represent a clash between the two "admiralty" judges of the First Circuit, a bias induced by subsequent maritime oil spill disasters off the New England coast, or a total misconception of the case by

⁶ U.S. Sup. Ct. Rule 19, 28 U.S.C.A.

Judge Aldrich.⁷ Either the lower court judge was confused and unduly influenced by the oratory of Petitioners' counsel, or as we submit, the Court of Appeals chose the result it wanted to reach and, casting aside appellate restraint, reversed all findings of fact inconsistent with its predetermined conclusion. To do this, the Court reweighed the credibility of witnesses appearing at trial, substituted its judgment for that of the District Court on numerous controverted findings of fact, and assumed or invented new facts for which there was no support in the record. Petitioners are rightfully aggrieved when the Court of Appeals engages in a trial *de novo* and chooses to select facts convenient for its disposition of the case, as it did here. When the Court of Appeals also invents or assumes new, unsupported and erroneous facts critical to its decision in the case, Petitioners are entitled to the assistance of this Court to preserve a semblance of judicial fairness.

Only a few findings of fact reversed by the Court of Appeals are discussed here to underscore the factual legerdemain employed by the Court under the guise of the clearly erroneous rule. *McAllister v. United States*, 348 U.S. 19 (1954); *United States v. Gypsum Co.*, 333 U.S. 364 (1948); *Zenith Corp. v. Hazeltine*, 395 U.S. 100 (1969).

⁷ It is noteworthy that Judge Aldrich was not assigned to the case until nearly a year after the first oral argument, that he first became involved with the case at a subsequent oral argument tinged by an Order of Court inviting counsel to address the question of the consequences of a finding of joint fault, that he wrote the opinion of the Court, that he refused an application for rehearing, and that he did not have the benefit of the three views taken by the lower court judge riding two tankers at night, one through Hussey Sound and one through Portland Head, and attending aboard a Coast Guard buoy tender while Buoy 6 was raised and its position verified.

The decision of the case basically rests on the resolution of two crucial factual issues: (1) whether Buoy 6 was on station or off station immediately prior to TAMANO's transit of Hussey Sound, and (2) whether the misplacement of either Buoy 6 or 7 or both causally affected the pilot's perception and navigation during the transit. All parties, and both courts, agreed that both buoys were off station after the incident, but, contrary to the District Court, the Court of Appeals found that the pilot's navigation was faulty and that the propeller race of TAMANO moved Buoy 6 and its sinker, together weighing approximately ten tons, from an on-station position to a position 215 feet off station. It reached its conclusion in the following manner:

(a) The Court relied on the theory of Government expert Breslin, a theory which the District Court concluded was inconclusive and speculative on its face (D.C., pp. 25a-26a). Although the Court of Appeals stated that Buoy 6 was off station "... in precisely the direction Dr. Breslin's hypothesis called for" (C.A., p. 64a), the Court was blatantly wrong. The witness admitted that he did not even attempt to analyze the direction and distance in which Buoy 6 would be dislodged because it was too difficult to do (A., p. 849). In addition, the Court of Appeals found, in order to make Dr. Breslin's theory viable, that Buoy 6 passed within ten feet of the ship's side as it passed the stern (C.A., p. 60a). No witness so testified. All witnesses who observed the buoy near the stern placed it from twelve to thirty feet off the ship (Ferguson, A., p. 572; Dunbar, A., p. 359; Bjornes, A., p. 207; E., p. 320). Storheil only observed the buoy *amidships*, not near the stern, and from a position where he admitted it was difficult to judge the distance off the ship (A., p. 266; E., p. 327).

(b) The diver who shortly after the incident examined the sinker of Buoy 6 on the bottom for a radius of twenty feet around the sinker testified at trial that there was heavy marine growth on the chain and buoy bottom and that the ocean bottom, consisting of small 1"-4" diameter rocks over mud and sand, showed no evidence of being disturbed (Pastore, A., pp. 512-513). The District Court concluded, quite obviously, that the sinker could not have recently moved, confirming that the buoy was off station at the time of transit and that TAMANO could not have moved it. In an attempt to rebut this unassailable finding, the Court of Appeals fabricated a new fact outside of the record that the 4½-ton rectangular sinker had "rolled" rather than dragged into its new position (C.A., p. 64a). Not only did no one at the trial even suggest such a novel approach, but the government's own witness, Glahe, found in his tests on a buoy in Hussey Sound similar to Buoy 6 that the sinker would drag, not hop (E., p. 301).

(c) For the Court of Appeals to find that the buoy was on station at the time of TAMANO's transit, it had to and did find, contrary to the District Court, that TAMANO hit Buoy 6 under the anchor on the bluff bow, 39 feet in from the side (C.A., pp. 48a-53a). The buoy itself suffered only minimal damage, a hairline crack in the lens which was not readily apparent and three bent or damaged screws on the buoy base plate (D.C., pp. 19a-20a). Five experts testified as to whether or not they would expect more damage to the buoy if the bluff bow of the ship had hit the buoy 39 feet in from the side. The District Court, observing the witnesses as they testified on this hotly contested issue, found that the minimal damage to the buoy was inconsistent with the ship's hitting the buoy under the anchor 39 feet in

from the side (D.C., pp. 20a-22a). The Court of Appeals rejected this conclusion, reweighing the credibility of the experts, quoting the three government experts out of context, belittling the testimony of Captain Fertig, the only master mariner who had been on a ship similar to TAMANO that had hit a large, lighted buoy on its bluff bow, and discrediting the testimony of an eminently qualified naval architect solely because he was a naval architect and not a "navigational expert" (C.A., pp. 55a-57a).

(d) To overturn the District Court's factual finding that the admitted mispositioning of Buoy 7 by the Coast Guard was the causal element in the striking (D.C., pp. 9a, 27a, 39a), and to find instead that the off-station position of Buoy 7 did not significantly alter Dunbar's perspective and thus was not the proximate cause of Dunbar's "funny feeling" and the stranding of the TAMANO, the Court of Appeals again went outside the record and fabricated new evidence by engaging in a computation of the angle between Buoys 6 and 7 as seen by the pilot (Dunbar) at the time he commenced his turn to starboard (C.A., p. 69a, fn. 19). The Court of Appeals erroneously made reference to a 1° change in perspective and concluded that this was not significant. There is no such evidence in the record to support such an inference.

There are substantial obvious dangers when a court begins to engage in experiments and exercises on its own in order to substantiate its predetermined conclusion. If such an exercise is performed by a trial court during an adversary proceeding in which counsel are given an opportunity to comment, the danger for error is greatly reduced. A calculation performed by an appellate court after oral

argument provides no such opportunity. The Court of Appeals' error was compounded by its failing to understand the significance of relative angles in piloting and by its not having the benefit of the views taken by the District Court, thus causing the Court of Appeals to disregard a key finding of the District Court.

Other findings of fact of the District Court which the Court of Appeals improperly reversed in equally egregious ways are set forth without discussion as follows:

1) That the TAMANO's starboard bow grazed Buoy 6 but did not strike it under the starboard anchor, 39 feet inboard (D.C., pp. 9a, fn. 13, 22a),

2) That Buoy 6 was 20 to 30 feet to starboard when it passed abeam of the bridge of TAMANO (D.C., pp. 10a, 26a),

3) That the sinker of Buoy 6 was 215 feet off station immediately prior to the TAMANO's transit (D.C., pp. 13a, 14a, 16a),

4) That Bosun Hanssen's testimony is inconsistent with the slight damage suffered by Buoy 6, and otherwise inconsistent with the record (D.C., p. 19a),

5) That the bulbous bow of TAMANO would have snagged Buoy 6's chain if the buoy had hit the ship 39 feet inboard (D.C., p. 20a, fn. 25),

6) That the water cushion effect of the bow wave of TAMANO could not have protected Buoy 6 on impact if the buoy struck 39 feet inboard (D.C., p. 21a),

7) That Dr. Breslin's theory was too problematical and speculative and unsupported by the record (D.C., pp. 25a-26a),

8) That Buoy 6 could not, without some explanation not supported by any evidence, have been drawn in at a right angle to the vessel some 85 to 95 feet into the center of the propeller race at the point between 88 and 100 feet behind the stern where it would have been subjected to the maximum force of the race (D.C., p. 26a),

9) That Pilot Dunbar properly relied on the Hussey Sound buoy system (D.C., p. 35a),

10) That due to the Coast Guard's actions, Pilot Dunbar could not have determined that Buoys 6 and 7 were off station (D.C., pp. 35a-36a),

11) That transiting Hussey Sound under the existent conditions was neither "inherently dangerous" nor negligent *per se* (D.C., p. 40a),

12) That the misplacement of Buoy 7 caused the pilot to turn too soon and to graze Buoy 6 (D.C., pp. 9a, 27a, 39a),

13) That the sole cause of this casualty was the negligence of the United States Coast Guard in failing to maintain Hussey Sound Buoys 3, 6 and 7 in their charted positions (D.C., p. 41a).

While Petitioners recognize that a Court of Appeals has a right to reverse a lower court's findings of fact based on the court's definite and firm conviction that a mistake has been committed, it is not empowered to reverse by fabricating new facts not in the record or completely contrary to evidence in the record and by engaging in experiments and computations outside of the record. This Court should

grant the Petition to correct the abuse of the Court of Appeals and thus to preserve the integrity of the appellate structure.

Respectfully submitted,

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APPENDICES

APPENDIX A

UNITED STATES DISTRICT COURT

DISTRICT OF MAINE

SOUTHERN DIVISION

**CIVIL Nos. 13-111, 13-114, 13-120,
13-156, 13-184 and
74-79-SD (Consolidated)**

M/V TAMANO ACTIONS

**FINDINGS OF FACT, CONCLUSIONS OF LAW,
AND DIRECTION FOR ENTRY OF JUDGMENT**

These six consolidated actions arise out of the discharge into the waters of Casco Bay of approximately 100,000 gallons of Bunker C oil by the tanker M/V TAMANO when, while passing through Hussey Sound early on the morning of July 22, 1972, she struck an outcropping of "Soldier Ledge." Civil Nos. 13-111, 13-120 and 13-156 are class actions brought on behalf of owners of shore property, boat owners, commercial fishermen and commercial clam diggers alleged to have been damaged by the spill, and Civil No. 13-114 is an action brought by the State of Maine and its Board of Environmental Protection to recover damages claimed to have been sustained by the State as a result of the spill. Various named as defendants in all these actions are the TAMANO, her owners and her captain (hereinafter jointly referred to as "Tamano"); the TAMANO's pilot and the Portland Pilots Association (hereinafter jointly referred to as "Portland Pilots"); the TAMANO's charterer, Texaco Panama, Inc. and Texaco, Inc. (herein-

after jointly referred to as "Texaco"); and the United States of America. In each action, Tamano and Portland Pilots (hereinafter jointly referred to as "Tamano-Pilots"), on the one hand, and the United States, on the other hand, have filed cross-claims or third-party claims. In addition, Tamano has filed two direct actions against the United States, Civil Nos. 13-184 and 74-79-SD, in which the United States has filed counterclaims. In Civil No. 13-184 the United States has also filed a third-party claim against Portland Pilots.

Extensive litigation arising out of the casualty¹ has, through settlement of the claims of the class action plaintiffs and the State of Maine, and otherwise, resolved itself into the instant action between Tamano-Pilots and the United States. By agreement of the parties, the issue of liability for the striking only² has been severed and tried before the Court without a jury. In the present action, Tamano-Pilots allege that the sole proximate cause of the grounding of the TAMANO was the negligence of the United States Coast Guard in permitting the Soldier Ledge buoy to be off-station and in failing to properly locate and maintain other buoys and aids to navigation which are essential for safe passage through Hussey Sound. The United States contends that the sole proximate cause of the

¹ See, e.g., *Burgess v. M/V Tamano*, 373 F. Supp. 839 (D. Me. 1974); *Burgess v. M/V Tamano*, 370 F. Supp. 247 (D. Me. 1973); *Maine v. M/V Tamano*, 357 F. Supp. 1097 (D. Me. 1973).

² Any trial on the issue of damages resulting from the striking is to be held at a later date. The parties have also agreed that trial of the issues presented by their respective claims of additional damages resulting from the alleged negligence of either the United States Coast Guard or Tamano in the conduct of containment and cleanup operations be deferred.

casualty was the negligent navigation of the vessel through Hussey Sound by the TAMANO's captain and/or pilot.

Having received and considered the evidence and the written and oral arguments of counsel, the Court now makes its findings of fact and conclusions of law on the issue of liability for the striking, and directs entry of its judgment as follows:

FINDINGS OF FACT

1. At approximately 2300 on the evening of July 21, 1972, the M/V TAMANO, an 88,000 ton, bridge aft, single screw supertanker owned by Wilhelm Wilhelmsen, Oslo, Norway, and chartered to Texaco Panama, Inc., with a cargo of Venezuelan crude oil, arrived off Portland Lightship on a voyage from Puerto La Cruz, Venezuela, to Portland, Maine. TAMANO's overall length was 810 feet, her length between perpendiculars was 783 feet, her depth was 58 feet, and her overall breadth was 127 feet 9 inches. She had a bluff, "bulbous" bow. The pitch of her propeller was 15 feet 2¾ inches and its diameter was 21 feet 11¾ inches. On the night in question, her draft was 44 feet 3 inches forward and 44 feet 6 inches aft. She was equipped with an automatic pilot; bridge clock; master gyro compass in the engine room with repeaters on both wings of the bridge and a third repeater on the steering stand; magnetic compass on the bridge; Decca navigation system; echo sounder; engine rotation indicator; engine telegraph; intra-ship communication system between engine room and bridge; ICS communication system; loud speaker communication between bridge and forecastle; two radars (a 10 cm. Ratheon Pathfinder Model 2502 true-relative motion set and a 3 cm. Ratheon Pathfinder Model 1656 relative motion set, each having a 40-mile range); radio direction finder; rudder in-

dicator; Saal log; VHF radio; course recorder;³ and automatic engine telegraph bell recorder, all of which, with the exception of the 3 cm. radar, which was not used in entering ports, were in good working condition. The course recorder clock was set on Greenwich Mean Time and was about ten minutes slower than the vessel's bridge clock, which was set on Eastern Daylight Saving Time. The automatic engine bell recorder clock was three minutes slower than the bridge clock.

2. At 2335, Captain Charles Dunbar, a licensed Portland Harbor, Casco Bay and Hussey Sound pilot boarded the TAMANO to take her from the Portland Lightship to the Oil Anchorage Area in Hussey Sound, where the vessel was to offload part of her cargo on the morning of July 23 before entering Portland Harbor. Captain Dunbar is a graduate of the Maine Maritime Academy and has been a Portland pilot since 1968. In 1971, he attended the Port Revel Ship Handling School near Grenoble, France, where he took a special course in the handling of large tonnage vessels. He had made over 1200 trips as a Portland pilot, and had transited Hussey Sound approximately 100 times during the preceding four years. Other than the TAMANO casualty, he has never been involved in an accident while operating as a Portland pilot. Captain Dunbar was accompanied by a "rider" pilot, Captain G. Douglas Ferguson, a licensed Portland Harbor pilot, who was riding the ship through Hussey Sound as part of the training necessary to extend his pilotage to those waters.

³ A course recorder records, by a moving pen on a roll of paper, the exact heading of a ship in degrees, minute by minute. The course recorder clock is independent of the bridge clock and the times are therefore not necessarily synchronized.

3. The TAMANO had departed Puerto La Cruz on July 16 for a port north of Hatteras. At about Hatteras, two days before arrival at Portland, she received telegraphed final destination orders directing her first to Hussey Sound, then to Boston and Philadelphia. Her navigating mate, First Officer Storheil, broke out three British Admiralty Charts, the one covering the area in question in the greatest detail being BA #2488 issued in 1967.⁴ This chart showed the Soldier Ledge buoy, HSLB No. 6, in its pre-1967 position, the buoy having been moved in 1967, at the request of Portland Pilots, 150 feet closer to the Ledge. The ship's master, Captain Bjornes, also consulted British and Norwegian Notices to Mariners and Tide Tables for Hussey Sound, and noted that the depth of water over Soldier Ledge was 40 feet at low water.

4. For several weeks prior to July 22, the local Notices to Mariners, which Portland Pilots received on a regular basis, had advised that two new lighted buoys were being established at the entrance to Hussey Sound and that the other buoys in Hussey Sound were being renamed and renumbered. On the afternoon of July 20, while piloting another vessel into Portland Harbor, Captain Dunbar had observed the Coast Guard buoy tender COWSLIP in Hussey Sound and was advised by COWSLIP's personnel by radio that the work on the buoys was almost complete. The following afternoon, July 21, the Coast Guard Base, South Portland, called Portland Pilots' office and advised officially that the two new buoys, HSALB No. 2 and HSLB No. 4, had been established, and that all of the other buoys had been renamed and renumbered, and their positions verified, in

⁴ TAMANO did not have on board USC&GS Chart No. 325, the most detailed chart covering the Hussey Sound area, or any local Notices to Mariners.

accordance with the previously published Notice to Mariners. Captain Dunbar personally plotted the positions of the two new buoys on the copy of USC&GS Chart #325 maintained by Portland Pilots in its office.

5. Captain Dunbar learned that he would be piloting the TAMANO on the morning of July 21, and that her estimated time of arrival at Portland Lightship was 2130 that evening. He had not previously piloted the TAMANO. In preparation for the assignment, he obtained the vessel's characteristics from Clark's Tanker Registry. He also checked the Tide Tables.

6. When Captain Dunbar boarded the TAMANO, he marked the positions of the two new buoys on her British Admiralty Chart for Casco Bay and Hussey Sound and described to Captain Bjornnes the course he intended to take through Casco Bay and Hussey Sound to the Tanker Anchorage Area. The tide was ebbing. The next low water was at 0305, and the next high water was at 0920. The tide in the area has a range of 8.4 feet. The wind was negligible and the seas were calm. There was fog in the area of the Lightship, but it was clear further in.

7. On the bridge of the TAMANO during the transit of Hussey Sound were pilots Dunbar and Ferguson; the ship's master, Captain Bjornnes; her navigating mate, First Officer Storheil; the helmsman Naess; and on the starboard bridge wing, the lookout Garcia. Shortly after midnight, the TAMANO's boatswain, Sverre Hanssen, went to the forecastle to ready the ship's anchors. After doing so, he stood on a small platform on the starboard side of the forward end of the forecastle, relaxing and waiting for the ship to reach the anchorage.

The Transit of Hussey Sound

8. The TAMANO maneuvered away from the Lightship at 2335.⁵ As she proceeded from the Lightship toward West Cod Ledge, the fog lifted and the entire bay and shoreline became visible. While on a gyro compass heading of 320°, with the Lightship directly astern and Portland Headlight dead ahead, Captain Dunbar determined by radar and sight bearings that there was about a 2° Westerly error in the gyro compass.⁶

9. At 0023 (course recorder time) the TAMANO passed between Corwin Rock and West Cod Ledge Buoys, altered course to starboard and proceeded on a Northerly heading toward Eastern Approach Buoy No. 1 and Hussey Sound. At 0047, the vessel passed Eastern Approach Buoy No. 1 at a distance of approximately three-tenths of a mile to its port side. Continuing on generally Northerly headings, favoring her port side in order to stay well clear of the 42-foot shoal marked by the newly established Buoy No. 2, the TAMANO passed that buoy at a distance of about three-tenths of a mile to starboard. At 0103, just before the TAMANO passed Buoy No. 2, Captain Dunbar ordered the engine on Slow Ahead and Dead Slow Ahead in order to prepare for the long port turn into Hussey Sound. The TAMANO continued on a 360° course⁷ until the Eastern Point Breakers Buoy (HSLGB No. 3), the Soldier Ledge Buoy (Buoy No. 6) and the Pumpkin Nob Buoy (HSLBB

⁵ Unless otherwise noted, the times recorded in these findings are bridge clock times.

⁶ While concededly not the most precise method of determining the gyro error of a compass, Captain Dunbar's determination is the only affirmative evidence in the record as to what the TAMANO's gyro error may have been.

⁷ Unless otherwise noted, the headings recorded in these findings are gyro readings.

No. 7) were approximately in line,⁸ at which time (0108.5) Captain Dunbar ordered the engines on Slow Ahead and started the turn into Hussey Sound. The tide was about two hours before low water, and the current ebbing at about $\frac{3}{4}$ to 1 knot. While the TAMANO was turning toward Buoy No. 3 and into Hussey Sound, Captain Dunbar ordered the engines to Half Ahead at 0110.5 to increase the rudder power. As the vessel's bow passed abeam of Buoy No. 3 at 0113.5, she completed the turn, and Captain Dunbar ordered the engines to Full Ahead and steadied on a course of about 310° (True). The TAMANO passed Buoy No. 3 at a distance of 450 to 600 feet to port at a speed of between 5 and 6 knots.⁹

10. After passing Buoy No. 3, Captain Dunbar concentrated his attention on the relative positions of Buoys No. 6 and No. 7 to determine the time to start a right swing from his 310° course in order to pass between the two buoys, which were then fine on the TAMANO's starboard bow.¹⁰

⁸ All parties agree that Buoys No. 3, No. 6 and No. 7 constitute the principal aids to navigation in the transit of Hussey Sound and that after proceeding on Northerly headings from West Cod Ledge past Eastern Approach Buoy No. 1 and Hussey Sound Buoy No. 2, it is the customary practice of pilots to begin the port turn into Hussey Sound when Buoys No. 3, No. 6 and No. 7 appear as if they are approximately in line. Captain Dunbar explained the lining up of the buoys as follows:

Right in the middle is Soldiers Ledge No. 6. Actually it is the Pumpkin's Knob and Eastern Point Breakers Buoy that actually line up, and Soldiers Ledge Buoy is just outside of that but they nearly line up. When we reached that point on the TAMANO, I initiated the turn to port into the entrance of Hussey Sound.

⁹ See Discussion *infra*.

¹⁰ All parties agree that after passing Buoy No. 3, the pilot entering Hussey Sound must next direct his attention to making a starboard turn which will carry the vessel between Soldier Ledge,

He continued on the 310° course for about four minutes. Observing Buoys No. 6 and No. 7 as their positions relative to each other changed, he had a "funny feeling" that the buoys were opening prematurely—that the vessel had not been on the 310° course long enough for the buoys to be opening, which would indicate that he was further west in the channel than he should have been. He hesitated starting the starboard turn for about five seconds while considering the consequences of failing to rely upon their relative positions.¹¹ Captain Dunbar then started the starboard turn, keeping Buoy No. 6 fine on the starboard bow and pulling up to it so that the ship would pass close to the buoy, his intention being to clear the buoy by at least five feet.¹² Instead, the TAMANO's starboard bow grazed the buoy.¹³

marked by Buoy No. 6, and Pumpkin Nob, marked by Buoy No. 7. The parties also agree that the pilot customarily relies upon the relative positions of these two buoys in determining when to initiate the starboard turn.

There is approximately 450 yards of water between Buoy No. 6 and Buoy No. 7. If the pilot starts the turn too soon, he will run aground on Soldier Ledge. If he delays too long, he will run onto the shoals off Peaks Island. The pilot must make his decision in a matter of seconds.

¹¹ Captain Dunbar testified that since the tide was ebbing, he feared a delay in making the turn would cause the tide to take the vessel onto the Peaks Island Shoals. It did not occur to him that one or both of the buoys might be off-station because he had observed the Coast Guard in Hussey Sound the day before and had received an official report from the Coast Guard that the buoys had been renumbered, renamed, and their positions verified.

¹² Captain Dunbar testified, without contravention, that it was customary for the pilot to "hug" Buoy No. 6 when entering the Hussey on an ebb tide in order to avoid grounding on Peaks Island.

¹³ The Court rejects the contention of the United States that the TAMANO struck Buoy No. 6 under its starboard anchor 39 feet inboard of the starboard side. The Court also rejects the contention of Tamano-Pilots that the TAMANO did not strike Buoy

At the time the vessel passed Buoy No. 6, her heading was 350° and her speed between 6 and 7 knots.¹⁴ After grazing Buoy No. 6, the TAMANO completed its turn and the buoy was 20 to 30 feet to starboard when it passed abeam of the bridge. The buoy was logged abeam the pilothouse at 0120. As the buoy passed down the TAMANO's starboard side, Captain Dunbar stopped the vessel's engines to avoid having the buoy's mooring chain foul the propeller (0119.5). As the buoy passed clear aft, he put the engines Full Ahead (0120), and steadied on a course of 350°.

11. Seconds after grazing Buoy No. 6, the TAMANO struck the Northwest corner of Soldier Ledge at a point 17.6 feet inboard of her starboard side, holing her No. 1 starboard wing tank. She was on a steady course of 350° when she struck the Ledge.¹⁵ When the TAMANO passed Soldier Ledge, neither Captain Dunbar nor the bridge watch felt or saw anything to indicate that the vessel had struck the Ledge. No report of any difficulty in the passage was received until after the vessel had anchored.

12. After striking the Ledge, the TAMANO remained on a steady course of 350° for a little more than three minutes, which took her to a position well north of Soldier Ledge, before her heading was changed. Thereafter, she proceeded

No. 6. While the evidence clearly supports the conclusion that the TAMANO contacted the buoy, it is most consistent with a finding that the contact was slight and that it occurred at a point much closer to the outer edge of the bow, most likely at the point where the bow begins to taper off into the flat side of the ship. See Discussion *infra*.

¹⁴ See Discussion *infra*.

¹⁵ The scoring on the bottom of the TAMANO was examined in dry dock and found to be parallel to the keel, indicating, as the parties agree, that she was on steady course when she struck the Ledge.

to the Oil Anchorage Area, where approximately 100,000 gallons of her cargo of No. 6 residual oil spilled into the waters of Casco Bay.

The Position of the Hussey Sound Buoys

13. Hussey Sound is a narrow "gut" extending in a general Northwesterly direction from outer Casco Bay to the Oil Anchorage Area in the inner bay. The presently relevant portion of the Sound is bounded on the Southwest by Peaks and Pumpkin Nob Islands and on the Northeast by Overset and Long Islands. The distance between headlands is approximately 1100 yards. In the geographic center of Hussey Sound lies Soldier Ledge, a charted rock outcropping covered by 40 feet of water at mean low tide. Buoy No. 6 marks the Southwest corner of the Ledge. Buoy No. 6 is a standard 8 by 26 foot lighted buoy. It is located in 73 feet of water (corrected to mean low water) and was attached to an 8500-pound sinker (a 5 by 5 foot cement block) by 240 feet of 1½-inch chain, weighing 183 pounds per fathom.

Buoy No. 3 is located at the seaward entrance to Hussey Sound. It marks the Northeasterly extremity of a ledge extending from the Easterly shore of Peaks Island and is located about 1250 yards Southeasterly of Buoy No. 6.

Buoy No. 7 is located at the inshore exit of the presently relevant portion of Hussey Sound. It marks the Easterly end of Pumpkin Nob and is located approximately 450 yards Northwesterly of Buoy No. 6.

Buoys No. 3, No. 6 and No. 7 are the critical aids to navigation for a vessel transiting Hussey Sound. In July 1972, the United States Coast Guard Buoy Tender COW-SLIP had primary responsibility for the servicing and positioning of these aids.

14. On July 20, 1972, two days before the TAMANO casualty, pursuant to a Tender Order issued by the Commander, First Coast Guard District, the COWSLIP left Base South Portland, to make certain changes in the Hussey Sound buoys and to service the aids she was scheduled to visit. She proceeded as follows:¹⁶

(a) COWSLIP first established new Buoy No. 2 (marking the 42-foot shoal Southwesterly of The Hussey) and new Buoy No. 4 (marking the 45-foot shoal Southeasterly of Overset Island).¹⁷ After resetting Buoy No. 10 (marking Ponce Ledge Westerly of Long Island), COWSLIP next proceeded to Buoy No. 7, which she found to be 50 yards off-station toward deep water. Buoy No. 7 was pulled aboard for annual servicing, and the sinker was brought off the bottom and suspended over COWSLIP's side. While the buoy was

¹⁶ The COWSLIP's personnel, who carried out the navigational aspects of her assignment, included Lt. Cdr. Stephen Richmond, who took over command from Lt. Cdr. Norman Brunelle on July 14, 1972; Lt. Joseph Telep, Executive Officer, who joined COWSLIP on August 31, 1971; Ens. Edward G. Webb, Acting Navigation Officer, who joined COWSLIP on January 28, 1972 and who relieved the regular navigation officer on July 17, 1972; QM 1/c Earl C. Sanborn, who joined COWSLIP on March 27, 1972; and QM 3/c Hardy, who joined COWSLIP on July 18, 1972. Lt. J. R. Cuniff a Reserve officer, who reported for two weeks Reserve training on July 16, 1972, was also on board.

COWSLIP was equipped with a gyro compass with repeaters on each bridge wing with telescopic alidades. The gyro compass cards were calibrated to the nearest whole degree. She also had three sextants, one of which was broken.

COWSLIP's small boat was a 24-foot plastic cargo boat with a GM-471 engine, a hand lead and a small magnetic compass without any bearing ring. The small boat carried a portable radio to communicate with the ship.

¹⁷ COWSLIP had to return and reset Buoy No. 4, which had been set 1000 yards off-station because her navigators had used an uncharted object to position it the first time.

on board the COWSLIP, the position of Buoy No. 7 was established by having the small boat,¹⁸ utilizing COWSLIP's sextants, set a marker buoy, take sextant angles on the marker buoy and radio the angles to Sanborn on COWSLIP, who plotted the angles and then advised the small boat where to drop the next marker buoy. When Sanborn determined that the marker buoy was on the charted position of Buoy No. 7, COWSLIP approached the marker buoy and dropped the sinker. In fact, when the COWSLIP left Buoy No. 7, it was off-station by about 175 feet to the Northwest of its charted position. *See infra.*

(b) After servicing and repositioning Buoy No. 7, COWSLIP spent approximately one-half hour servicing Buoy No. 6, which was renamed and renumbered. The sinker was not pulled off the bottom or in any way disturbed. Since COWSLIP's sextants were aboard the small boat, Sanborn verified the position of Buoy No. 6 by using gyro bearings. In fact, Buoy No. 6 was off-station by about 215 feet to the Southeast of its charted position. *See infra.*

(c) After servicing Buoy No. 6, COWSLIP proceeded to Buoy No. 3, which was found to be off-station and was reset in the same manner as Buoy No. 7. In fact, COWSLIP reset Buoy No. 3 off-station by about 130 feet to the Northeast of its charted position. *See infra.*

15. There was no change in the positions of the sinkers of Buoys No. 3, No. 6 and No. 7 between July 20, when

¹⁸ COWSLIP's small boat was manned by Ens. Webb, QM 3/c Hardy and Lt. Cuniff, it being Ens. Webb's responsibility to check the buoy.

COWSLIP left them, and July 22, when the TAMANO transited Hussey Sound.

16. Subsequent to the TAMANO casualty, the positions of Buoys No. 3, No. 6 and No. 7 were investigated and verified as follows:

(a) On July 22, BM 1/c Wayne F. Mills, attached to Coast Guard Base, South Portland, proceeded to Hussey Sound in a 46-foot buoy boat, which he attached to Buoys No. 3 and No. 6. He determined by sextant angles and reported to the Group Commander that both buoys were off-station.

(b) On July 22 and 23, Portland Pilots' Captain Granville I. Smith proceeded to Hussey Sound in the pilot boat. On both days he took sextant angles on Buoy No. 6 and determined that it was sufficiently likely the buoy was off-station to warrant hiring a surveyor.

(c) On July 24, Edward Norris, a Portland surveyor retained by Portland Pilots, surveyed the position of Buoy No. 6. He found it was off-station about 133 feet Southeasterly of its charted position. When Norris made his survey, at 1830, the current was flooding.¹⁹

(d) On July 26 and again on September 14, 15 and 18, a professional diver, Joseph Pastore, employed by Tamano-Pilots, dove on the sinker of Buoy No. 6. He found heavy marine growth on the bottom of the buoy and on its chain to a depth of approximately 80 feet and "fuzzy" growth thereafter. He also found three revolutions of chain wrapped around the sinker. Diver Pastore did not find any physical evidence which would

¹⁹ The United States has stipulated to the correctness of the Norris survey.

indicate that the sinker had been recently moved or disturbed. He measured 175 feet of chain from the buoy to the sinker and determined that the sinker was resting on a rocky bottom in 120 feet of water.

(e) On various occasions between August 7 and September 18, Frank V. Wright, Jr., a professional engineer and surveyor, retained by Tamano-Pilots, surveyed by triangulation from three land stations (two on Peaks Island and one on Overset Island) the positions of Buoys No. 3, No. 6 and No. 7. He determined that the sinker of Buoy No. 3 was off-station by about 130 feet to the Northeast of its charted position; the sinker of Buoy No. 6 was off-station by about 215 feet to the Southeast (162° True) of its charted position; and the sinker of Buoy No. 7 was off-station by about 175 feet to the Northwest of its charted position. Wright also plotted the positions of the buoy bodies at various tide levels. He determined that at approximately two hours before low water (the state of the tide at the time of the TAMANO's transit), Buoy No. 6 was about 310 feet Southeasterly of the charted position of its sinker, Buoy No. 3 was about 200 feet Easterly of the charted position of its sinker, and Buoy No. 7 was about 120 feet Northwesterly of the charted position of its sinker.²⁰

17. There was no change in the positions of the sinkers of Buoys No. 3, No. 6 and No. 7 between July 22, when TAMANO transited the Sound, and September 18, when

²⁰ The United States has stipulated to the correctness of the Wright survey.

Wright completed his survey of the buoy and sinker positions.²¹

18. When the TAMANO transited Hussey Sound in the early morning of July 22, 1972, Buoys No. 3, No. 6 and No. 7 were all off-station as shown on the Wright survey, *supra*.

DISCUSSION

It is apparent, as the parties agree, that liability for the TAMANO casualty principally depends upon the resolution of two interrelated factual questions: (1) whether, as Tamano-Pilots contend and the United States denies, Buoy No. 6 was off-station as shown on the Wright survey when the TAMANO transited Hussey Sound in the early morning of July 22, 1972; and (2) whether, as the United States contends and Tamano-Pilots deny, the bow of the TAMANO struck Buoy No. 6 39 feet inboard just below the starboard anchor immediately prior to striking Soldier Ledge. As is evident from the foregoing Findings of Fact, the Court is persuaded that: (1) when the TAMANO transited the Sound, Buoy No. 6, as well as Buoys No. 3 and No. 7, was off-station as shown on the Wright survey; and (2) although the TAMANO's starboard bow grazed Buoy No. 6, it did not strike that buoy 39 feet inboard below the starboard anchor.

Of primary significance to the Court's determination are the following undisputed facts:

²¹ The Court rejects the contention of the United States that the force of the TAMANO's propeller race as the buoy passed under her stern dislodged the sinker of Buoy No. 6 from its charted position. See Discussion *infra*. The parties have stipulated that there occurred no weather or other natural condition in Hussey Sound between July 20 and September 18 which would have moved the sinkers of Buoys No. 3, No. 6 and No. 7 from their charted positions.

(a) The TAMANO struck an outcropping at the Northwesterly extremity of Soldier Ledge while on a steady course, and was holed at a point 17.6 feet inboard from her starboard side;

(b) If Buoy No. 6 was on-station, the TAMANO would have had to strike the buoy approximately 39 feet inboard under her starboard anchor in order to hit the Ledge at the undisputed point of contact, both on the vessel and on the Ledge; conversely, if the TAMANO had missed or grazed the buoy, she could not have hit the Ledge at the undisputed point of contact—she would have passed well to the west and clear of the Ledge.

(c) If Buoy No. 6 was off-station as shown on the Wright survey, the TAMANO would have had to clear, or possibly just graze, the buoy in order to hit the Ledge as she did; conversely, if the TAMANO had hit the buoy 39 feet inboard under her starboard anchor, it would have been impossible for her to have struck Soldier Ledge at the undisputed point of contact—she would have run aground on the Ledge approximately 39 feet Easterly of the point where she did.

It is evident from the foregoing propositions, upon which the parties agree, that a finding that the TAMANO hit Buoy No. 6 in the manner contended by the United States compels a finding that the buoy was on-station, but a finding that the TAMANO either missed or grazed the buoy, as contended by Tamano-Pilots, compels a finding that the buoy was off-station. Similarly, a finding that Buoy No. 6 was on-station requires a finding that the TAMANO struck

the buoy as contended by the United States, but a finding that the buoy was off-station requires a finding that the TAMANO either missed or grazed the buoy, as contended by Tamano-Pilots.

The Striking of Buoy No. 6. The evidence is conclusive that the bow of the TAMANO at least grazed Buoy No. 6. On July 22, shortly after the accident, BM 1/c Mills, who had been assigned to verify the position of the buoy, boarded the buoy and found paint chips on top of the buoy cage. On July 24, he returned to the buoy and put the paint chips in a bottle. On the same day, he took paint samples from the TAMANO's port bow, her starboard bow being inaccessible because of an oil boom and barges, and likewise bottled them. These paint samples were analyzed by an FBI laboratory analyst, Henry B. Heiberger. His analysis established that both sets of samples matched layer-for-layer by paint color and type, number, order and thickness. Based on this analysis, Heiberger testified without contravention that the buoy chips came from the TAMANO, unless by some incredible coincidence, they had come from some other object painted with the same seven layers of paint in the same manner.²² The only reasonable inference which can be drawn from the identity of these paint samples is that the bow of the TAMANO must have contacted the buoy in order for the paint chips to have been found on the buoy. The evidence of the paint chips is corroborated by the fact that when Mills boarded the buoy on the day of the casualty he found the buoy's lens cracked and two bent and one broken battery pocket dog, although when the COWSLIP serviced the buoy on July 20, the lens was then found to be in good condition. The

²² Heiberger also testified that his analysis of the paint samples indicated a "brush" of the buoy, rather than a "head-on" contact.

paint chip evidence is further supported by the actions of the TAMANO's master, who testified that when he was trying to stabilize the situation after the ship arrived at anchorage, he was under the impression that the vessel had been holed close to the waterline when she struck the buoy.

The evidence on the question of whether the TAMANO struck Buoy No. 6 at the point alleged by the United States is conflicting and difficult to reconcile. In support of the contention that the vessel hit the buoy 39 feet inboard under the starboard anchor, the United States relies principally upon the testimony of Bosun Hanssen, who was standing on a platform at the starboard side of the forward end of the forecastle awaiting orders to drop the anchor. Hanssen claims that he saw the TAMANO hit the buoy under the starboard anchor. He also claims to have heard the TAMANO hit the buoy a second time in the vicinity of the aft end of the forecastle, and a third time further aft, as the buoy scraped the TAMANO's side and hit the accommodation ladder.²³ Hanssen's testimony, however, was substantially shaken on cross-examination²⁴ and is inconsistent with the uncontroverted physical evidence of the minimal damage to the buoy found following the casualty. The buoy

²³ It is undisputed that Hanssen was the only person who had a completely unobstructed view as the vessel approached the buoy, since the flare of the bow obstructed the view of the approaching buoy from the bridge.

²⁴ Hanssen did not testify in person at the trial, but his deposition was made part of the record. On cross-examination he admitted that he did not actually see the buoy strike the TAMANO's bow. His cross-examination further developed that he was alleged to be drunk, had numerous axes to grind, and was considered unreliable. He was also unable to explain why he had failed promptly to report to the bridge that the vessel had hit the buoy and did not mention this fact until ten minutes later when Storheil came forward to supervise the anchoring.

showed no evidence of being hit other than a hairline crack on the hinge section of the lens and two bent and one broken pocket dog. The probabilities are convincing that an 88,000-ton bulbous-bow tanker traveling at 6 to 7 knots which struck an 8 by 26 standard lighted Coast Guard buoy bluff on its bow would have badly damaged, if not destroyed, the buoy body, cage, protective ring and light.²⁵

Concededly, the expert witnesses were in disagreement as to the probable extent of the damage to Buoy No. 6 if it had been struck by the TAMANO as the United States contends. The three navigational experts presented by the United States on this point, Captain George Young, Captain Robert F. Stap and Captain Alan McNaughton, expressed the view that the TAMANO would not have done serious damage to the buoy, but all three conceded the likelihood that the buoy would have sustained more damage than it did.²⁶ The single navigational expert called by

²⁵ At oral argument, Pilots' counsel also persuasively demonstrated the high probability that if the buoy had been struck by the TAMANO on the starboard bow where Hanssen says he saw it, and if the sinker was on the port bow where it was plotted by the United States' expert witness Dr. Eda (*see infra*), the TAMANO's bulbous bow would have snagged the buoy's chain and carried the buoy and the sinker with it, causing very substantial damage to the buoy.

²⁶ Captain Young, a New Jersey docking pilot, testified that the only ship which he had been aboard which had hit a buoy was only 10,000 gross tons and 580 feet long and, more importantly, had a sharp bow unlike the bluff bow of the TAMANO. He also admitted that hitting the TAMANO under its starboard bow would have been "like running into a flat wall." Captain Stap, an Exxon master of many years experience, who testified that he had run over buoys without damage occurring, conceded the probability that at least the radar reflector would have been knocked off and the light knocked out. Captain McNaughton, Chief of Maritime Training at the Massachusetts Maritime Academy, who also testified to having hit buoys, expressed the view that "you could certainly have damaged the radar reflector and so on"

Tamano-Pilots on this point, Captain Arthur H. Fertig, testified that the buoy would have been completely destroyed as a result of the impact.²⁷ In short, all four experts concur that the damage observed on the buoy after the casualty was far less than that which they would have anticipated from the collision described by Hanssen.

Finally, the United States contends that the minimal damage to the buoy can be explained by the fact that as the TAMANO proceeded forward, it displaced a certain amount of water, creating a pressure gradient which would tend to push the buoy away and act as a protective cushion. But Tamano-Pilots' expert witness, Professor Hamlin (*see infra*) testified that, while the displacement of water might temporarily create a cushion effect causing the buoy momentarily to bounce or roll away from the ship, since the buoy was fully stretched out on its chain, it would be drawn back to the vessel and dragged down the side of the ship, sustaining substantial damage. There is no dispute in the present case that Buoy No. 6 was on a full chain when the TAMANO passed, and none of the United States' experts have contradicted Professor Hamlin's analysis.

Although the expert testimony is conflicting and it is possible that the TAMANO might have hit the buoy under her starboard anchor without causing substantial damage, the Court is persuaded that it is far more likely that if the TAMANO hit the buoy at the point where Hanssen claims,

²⁷ Captain Fertig, a New York maritime consultant, was the only expert witness who had hit a buoy while on a ship (a 42,000-ton tanker) which had a bluff bow like the TAMANO's. He testified that the buoy had been "decimated" by the impact. The damage described by Captain Fertig is consistent with that described in other reported cases where a buoy had been struck by a surface similar to the TAMANO's bluff bow. *See, e.g., United States v. Tug Otto*, 296 F. Supp. 1130 (S.D. Tex. 1967).

the buoy would have sustained substantially more damage than it did.

On the entire record, the Court has concluded that the TAMANO's starboard bow grazed Buoy No. 6, but that it did not strike the buoy 39 feet inboard under the starboard anchor as contended by the United States.

The Position of Buoy No. 6. The evidence is convincing that when the TAMANO transited Hussey Sound on July 22, 1972, Buoy No. 6, together with Buoys No. 3 and No. 7, was off-station as shown on the Wright survey. That survey, the correctness of which has been stipulated, disclosed that as of September 18, 1972, when Wright completed his survey, the sinker of Buoy No. 6 was off-station by about 215 feet to the Southeast of its charted position and that at approximately two hours before low water (the state of the tide when the TAMANO transited the Sound) the buoy itself was approximately 310 feet Southeasterly of the charted position of its sinker. The Wright survey further revealed that the sinker of Buoy No. 3 was off-station by about 130 feet to the Northeast of its charted position and at two hours before low water the buoy itself was about 200 feet Easterly of the charted position of its sinker; and that the sinker of Buoy No. 7 was off-station by about 175 feet to the Northwest of its charted position and at two hours before low water the buoy itself was about 120 feet Northwesterly of the charted position of its sinker. The United States has stipulated that the sinkers of these buoys could not have been moved by any storm or other natural condition between July 20 and the date of the Wright survey. The conclusion that there had been no change in the position of the sinker of Buoy No. 6 during this period is corroborated by the post-striking inspection of the buoy and its sinker by diver Pastore, who was un-

able to find any physical evidence which would indicate that the sinker had been recently moved or disturbed.

The United States strenuously urges that the Court must conclude that Buoys No. 3, No. 6 and No. 7 were on-station at the time of the TAMANO's transit, because the Coast Guard had serviced these buoys and verified their locations 36 hours before the casualty. But the record is replete with evidence of the COWSLIP's ineptitude in setting and verifying the positions of the Hussey Sound buoys on July 20. The COWSLIP's navigational personnel were grossly lacking in experience.²⁸ There is evidence that her compass was defective and that her gyro error had not been determined.²⁹ The position of Buoy No. 6 was determined by gyro bearings, instead of sextant angles, concededly not the most accurate method. The buoy was not brought to

²⁸ The record discloses that Commander Richmond had never been in Hussey Sound, had not had any previous ship-handling experience with COWSLIP, and had never served as a permanent navigating officer on a Coast Guard vessel. Neither QM 1/c Sanborn, who did all the plotting on COWSLIP, nor Ensign Webb, who was in command of the small boat, had been to Aids to Navigation School. COWSLIP was Sanborn's first buoy tender, and he had never been in Hussey Sound before. Of COWSLIP's other navigating personnel, Lt. Cuniff was a Reserve officer on board for two weeks training, with no regular duties, and QM 3/c Hardy had just joined COWSLIP on July 18. There is no evidence that Hardy had previously been in Hussey Sound or had attended Aids to Navigation School. The evidence also indicates that Commander Richmond took minimal, if any, steps to prepare himself for his navigational responsibilities on July 20 by reviewing the SANDS forms relating to the Hussey Sound buoys and the relevant Coast Guard manuals.

²⁹ The Sperry Marine System checked COWSLIP's compass on September 29, 1972. The Sperry representative found that the compass was defective because there was no clearance in the compass balances, and that the compass had a 2° variable error. The last time prior to July 20 that the COWSLIP's log indicates her gyro was checked was on July 10.

short stay. As Captain Fertig demonstrated, at least one improper bearing object was used; Sanborn's plot was inaccurate; and if correctly plotted, a triangle rather than a pinpoint fix would have been obtained. Furthermore, it is difficult to see how the method used and the conditions under which the COWSLIP's small boat attempted to ascertain the positions of Buoys No. 3 and No. 7 and reset them on-station could have approached an accurate positioning of these buoys. Ensign Webb conceded the extreme difficulty he experienced in attempting to hold the boat in position because the strong current in the Sound repeatedly set the boat off-station. The evidence further discloses that of the COWSLIP's two operable sextants Webb was attempting to use, one had a significant error and the other a discoloration around the edge of the mirror. Finally, the preparation of the SANDS forms was astoundingly sloppy and inaccurate.³⁰ In short, the Court cannot accept the COWSLIP's pre-striking verification of the positions of Buoys No. 3, No. 6 and No. 7 on July 20.³¹

The United States next argues that the TAMANO's hitting Buoy No. 6 and passing by close aboard could have caused it to go off-station. This contention is supported

³⁰ *E.g.*, on the SANDS form for Buoy No. 6, Sanborn recorded sextant angles, which admittedly were not taken; the official post-striking report to the Commander, First Coast Guard District, drafted by Lt. Telep and signed by Commander Richmond, reported identical sextant angles for Buoys No. 3 and No. 6 and also for Buoys No. 4 and No. 5, which was obviously impossible; Sanborn recorded the wrong sextant angles on the SANDS form for Buoy No. 7.

³¹ The incompetence of the COWSLIP's personnel is further revealed by their problems in establishing the new Buoy No. 4, marking the 45-foot shoal Southerly of Overset Island. After initially setting this buoy, the COWSLIP had to return and reset it because her navigators had used an uncharted object to position it the first time and had set the buoy some 1000 feet off-station.

by the testimony of Dr. John Breslin, Director of the Davidson Laboratory and Chairman of the Department of Ocean Engineering at the Stevens Institute of Technology. Dr. Breslin, unquestionably a distinguished naval architect and hydrodynamicist, testified that if the buoy had been struck in the manner claimed by Bosun Hanssen and if it then had passed close aboard down the side of the vessel, it would have been drawn into the vessel's propeller race aft and the 10,000-pound force generated by the propeller race with the propeller turning full ahead, as it was when the buoy passed the stern, would have been sufficient to displace the buoy, its chain and sinker, in a generally Southeasterly direction opposite to the vessel's heading, how far and in what direction being too difficult to predict. He testified that the full force of the propeller race is exerted only in the area directly behind the propeller in a cylindrical cone corresponding with the 22-foot diameter of the propeller and that the buoy would have to be virtually in the center line of the propeller race in order to be subjected to its full force. He further testified that since the propeller race does not interdict the surface of the water until a point which is equivalent to four propeller diameters from the stern, no appreciable force would be exerted on the buoy until it was approximately 88 feet behind the stern. Additionally, he testified that the propeller race continues to exert decreasing pressure up to a point which is equivalent to ten propeller diameters, or approximately 220 feet, from the stern, but he was unable to say that the force would have been sufficient to dislodge the buoy at any point more than 100 feet behind the stern.

While Dr. Breslin's hypothesis is not beyond the realm of possibility, it appears to be highly speculative and to

be based upon several critical assumptions which are not supported by the record. His analysis was predicated upon the assumption that the buoy was no more than ten feet from the vessel's side, and therefore no more than 70 to 75 feet³² from the center line of the propeller race when the stern passed abeam the buoy. Dr. Breslin also assumed that there was no change in the TAMANO's heading as the buoy passed down the vessel's side and that the ship's rudder remained amidship. The eyewitness testimony, however, discloses that the buoy was 20 to 30 feet to starboard when abeam the bridge; the stern of the vessel was moving away from the buoy; and the helm was not amidship when the Full Ahead order was given. Under these circumstances, it is highly dubious that the buoy could have been drawn in at a right angle to the vessel some 85 to 95 feet into the center of the propeller race at the point between 88 and 100 feet behind the stern where it would have been subjected to the 10,000-pound maximum force of the race. Dr. Breslin also admitted that a port or starboard rudder would split and deflect the propeller race.

The most serious flaw in Dr. Breslin's analysis, however, is that it provides no explanation for the undisputed fact that Buoys No. 3 and No. 7 were both found to be off-station by significant distances in the post-striking Wright survey. The United States does not suggest that the TAMANO's passage in any way disturbed the positions of these buoys.

Finally, the United States contends that if Buoy No. 6 had been some 310 feet off-station, Captain Dunbar, as a professional pilot with local knowledge, would have de-

³² Half the breadth of the TAMANO is 64 feet.

tected this fact. The government further points out that Buoy No. 6 was not reset by the COWSLIP on July 20 and the pilots of many other vessels transiting Hussey Sound prior to July 20 had relied upon the position of Buoy No. 6 without mishap. But the United States' own expert witness, Captain Stap, testified that a pilot passing through Hussey Sound at night would be unable to ascertain visually that Buoy No. 6 was some 300 feet off-station. Furthermore, although the COWSLIP did not reset Buoy No. 6, Buoys No. 3 and No. 7 were both reset off-station by substantial distances two days prior to the casualty. The mispositioning of these two buoys necessarily altered the relationship between the three buoys which concededly are the critical aids to navigation in Hussey Sound. Of particular significance, Buoy No. 7 was moved to a position about 175 feet to the Northwest of its charted position, which materially changed its orientation with respect to Buoy No. 6 and was undoubtedly the reason Captain Dunbar did not detect that Buoy No. 6 was off-station. The misplacement of Buoy No. 7 also adequately explains the reason groundings had not occurred prior to July 20.³³

On the entire record, the Court has concluded that when the TAMANO transited Hussey Sound on July 22, 1972, Buoy No. 6, together with Buoys No. 3 and No. 7, was off-station as shown on the Wright survey.

The Trackline Analyses. At trial, both parties presented the testimony of two highly competent expert witnesses,

³³ The fact that other vessels successfully traversed Hussey Sound prior to July 20 may also be explained by the fact that the 8.4-foot tide range would permit vessels of the TAMANO's draft to pass safely over Soldier Ledge at high tide. *See Afran Transport Co. v. United States*, 309 F. Supp. 650, 653-54 (S.D.N.Y. 1969), *aff'd*, 435 F.2d 213 (2d Cir. 1970).

each of whom developed a trackline of the TAMANO's passage through Hussey Sound, based upon an analysis of the vessel's course recorder tape. Tamano-Pilots' expert, Professor Norman A. Hamlin, a professor of naval architecture at the Webb Institute of Naval Architecture, constructed a track based upon the following pertinent assumptions: (1) Buoy No. 6 was off-station in the position in which it is located on the Wright survey when the TAMANO transited the Sound; (2) Buoy No. 6 passed very close to the TAMANO's starboard bow, but as the TAMANO continued its starboard turn, the buoy was 20 to 30 feet to starboard when it passed abeam the bridge; (3) the TAMANO was on a steady course of $349\frac{1}{2}^{\circ}$ True ($351\frac{1}{2}^{\circ}$ Gyro) when she struck the Ledge; (4) the vessel had a 2° Westerly gyro error; (5) the vessel's speed was $7\frac{1}{2}$ knots when she passed Buoy No. 6; (6) the vessel passed within 80 feet to starboard of Buoy No. 3 at a speed of $9\frac{1}{2}$ knots. Orienting his track to the Wright survey, Professor Hamlin demonstrated that the bow of the TAMANO passed close aboard Buoy No. 6, conceding that it was "virtually" in contact with the buoy,³⁴ and struck the Ledge at the undisputed point of contact, both on the ship and on the Ledge. He further demonstrated that if the buoy had been on-station, the ship would have cleared the Ledge.

³⁴ In response to a question by the Court, Professor Hamlin testified that even on his trackline analysis, it was quite possible the TAMANO actually contacted the buoy:

Yes, I think it's . . . it's anybody's guess quite frankly as to whether the ship contacted the buoy. The flow around the ship may well have moved the buoy off so that no contact took place and the movement would be very small. The necessary movement to completely avoid contact would be very small as one can tell from the track here, . . .

The United States' expert, Dr. Haruzo F. Eda, senior research engineer at the Davidson Laboratory and an associate professor in the Department of Ocean Engineering at the Stevens Institute of Technology, constructed a similar track based upon the following significant assumptions: (1) Buoy No. 6 was on-station in its charted position when the TAMANO transited the Sound; (2) the TAMANO struck Buoy No. 6 39 feet inboard under the starboard anchor, and the buoy was not more than 10 feet to starboard as it passed abeam the bridge; (3) the vessel was on a steady course of 352° True (352° Gyro) when it ran onto the Ledge; (4) the vessel had no gyro error; (5) the vessel's speed was $5\frac{1}{2}$ knots when it passed Buoy No. 6; (6) the vessel passed approximately 500 feet to starboard of Buoy No. 3 at a speed of about 9 knots, and maintained a speed of $5\frac{1}{2}$ knots for the entire distance between Buoy No. 3 and Buoy No. 6. Orienting his track to the charted positions of Buoys No. 3 and No. 6, he demonstrated that the TAMANO struck Buoy No. 6 39 feet inboard under the starboard anchor and struck the Ledge at the undisputed point of contact, both on the ship and on the Ledge.

Significantly, neither party in briefing or oral argument has placed substantial reliance upon the trackline analysis of its expert. Instead, each party asserts that the track constructed by the opposing party's expert is predicated on assumptions inconsistent with the eyewitness testimony and physical evidence. Thus, as the United States points out, Professor Hamlin assumes that the TAMANO passed less than 80 feet off Buoy No. 3 at a speed of $9\frac{1}{2}$ knots, although Captain Dunbar estimated 150 yards and 4 knots, Captain Bjornnes estimated 500-900 feet and 5 to 6 knots, and Mate Storheil estimated 600 feet. Professor Hamlin further assumes that the vessel's speed was $7\frac{1}{2}$ knots when

it passed Buoy No. 6, although Captain Dunbar estimated $5\frac{1}{2}$ knots, Captain Bjornes estimated 6 to 7 knots, and Mate Storheil estimated 6 knots. Finally, Professor Hamlin, accepting Captain Dunbar's determination of a 2° Westerly gyro error, apparently applied that error, not to the steering repeater course of 350° , but to the course recorder reading of $351\frac{1}{2}^\circ$, and determined that the vessel was on a steady course of $349\frac{1}{2}^\circ$ True and $351\frac{1}{2}^\circ$ Gyro when it struck the Ledge, although the testimony of Captain Dunbar, which was corroborated by that of Captain Ferguson, is that the gyro heading was 350° as Buoy No. 6 passed abeam the bridge. Similarly, as Tamano-Pilots point out, Dr. Eda assumes that Buoy No. 6 was not more than 10 feet to starboard when abeam the bridge, despite the eyewitness testimony of Captain Dunbar, Captain Bjornes and Captain Ferguson that it was 20-30 feet away. Dr. Eda further assumes that the TAMANO passed Buoy No. 3 at a speed of about 9 knots, despite the contrary eyewitness testimony, and maintained a constant speed of $5\frac{1}{2}$ knots between Buoy No. 3 and Buoy No. 6, although it seems clear that, as Professor Hamlin testified, the vessel would never have reached the Anchorage Area at that speed.³⁵ And finally, Dr. Eda, assuming a zero gyro error, determined that the vessel was on a true course of 352° , and a gyro course of 352° , when it hit the Ledge, despite the uncontroverted eyewitness testimony that the gyro reading was 350° when the bridge passed Buoy No. 6.³⁶

³⁵ On cross-examination, Dr. Eda admitted that he had not verified his assumed $5\frac{1}{2}$ -knot speed by extending his track beyond Buoy No. 6 in order to determine the position the TAMANO would have reached at that speed at the time she anchored after passing Buoy No. 6.

³⁶ Since the distance between Buoy No. 6 and the undisputed point of contact on the Ledge is approximately 600 feet, which is

While Professor Hamlin and Dr. Eda may have based the construction of their tracks on conflicting assumptions, a comparison of the shape of the tracks shows that they do not differ in any material respect. As the parties agree, both tracks show without any question that in order to have hit the Ledge at the undisputed point of contact, if Buoy No. 6 was on-station, the TAMANO would have had to strike the buoy approximately 39 feet inboard under the starboard anchor, but if Buoy No. 6 was off-station as shown on the Wright survey, the TAMANO could not have struck the buoy in that manner. Thus, although neither of the conflicting interpretations of the course recorder tape can be wholly reconciled with the eyewitness testimony and physical evidence,³⁷ both are consistent with the Court's conclusion that when the TAMANO transited Hussey Sound, Buoy No. 6 was off-station as shown on the Wright survey and, although the vessel's starboard bow grazed Buoy No. 6, it did not strike the buoy 39 feet inboard under the starboard anchor.³⁸

less than the TAMANO's 810-foot overall length, and Professor Hamlin and Dr. Eda agree that the vessel was on a straight course when it hit the Ledge, it seems evident that the gyro reading as Buoy No. 6 passed abeam the bridge would also be the vessel's heading as she struck the Ledge.

³⁷ Course recorder tapes are by their nature not capable of highly precise interpretation, and the Court is not required to accept an interpretation of a course recorder tape over the evidence of eyewitnesses or other evidence which it finds convincing. *Ira S. Bushey & Sons v. Standard Oil Co.*, 197 F.2d 788, 791 (2d Cir. 1952); *In re Tug Management Corp.*, 330 F. Supp. 486, 497 n.5 (E.D. Pa. 1971); *Red Star Towing & Transportation Co. v. Tug Catherine*, 305 F. Supp. 639, 641-42 n.5 (S.D.N.Y. 1969), *aff'd*, 431 F.2d 641 (2d Cir. 1970) (per curiam).

³⁸ As the Court has previously observed, while Captain Dunbar's estimate of a 2° Westerly gyro error concededly was not determined by the most precise method, it is the only affirmative evi-

Fault of the United States. The Court has found that when the TAMANO transited Hussey Sound on July 22, 1972, Buoy No. 6, as well as Buoys No. 3 and No. 7, was off-station as shown on the Wright survey, and that when the COWSLIP serviced the Hussey Sound buoys on July 20, their personnel failed to discover that Buoy No. 6 was off-station and reset Buoys No. 3 and No. 7 off-station. The Court has further found that, although the TAMANO "grazed" Buoy No. 6, if the buoy had been on its charted position, the vessel would have passed well to the west and clear of Soldier Ledge.

It is by now well established that once the United States has established an aid to navigation and engendered reliance on it, the United States is obliged to use due care to maintain it in good operating condition and on its charted position, and that the United States is liable if it has failed in its duty. *Indian Towing Co. v. United States*, 350 U.S. 61, 69 (1955); *Afran Transport Co. v. United States*, 309 F. Supp. 650, 654 (S.D.N.Y. 1969), *aff'd*, 435 F.2d 213 (2d Cir. 1970), *cert. denied*, 404 U.S. 872 (1971); *Universe Tankships, Inc. v. United States*, 336 F. Supp. 282, 288-89 (E.D. Pa. 1972), *aff'd*, 506 F.2d 1052, 1053 (3d Cir. 1974); *In re Inland Towing Corp.*, 307 F. Supp. 874, 880 (E.D. Va.

dence in the record as to what the error may have been. In any event, it seems evident that the $2\frac{1}{2}^{\circ}$ difference between Professor Hamlin's assumed $349\frac{1}{2}^{\circ}$ True heading and Dr. Eda's assumed 352° True heading is insignificant when comparing the two tracks over the short distance between Buoy No. 6 and the Ledge which is critical to this case. As Tamano-Pilots point out, if Buoy No. 6 had been on-station and the TAMANO had passed close aboard the buoy on either heading, there would have been a margin of safety of almost 15° (to a course of about 005° True) before the vessel would have run on the Ledge. Furthermore, it is undisputed that Captain Dunbar was not relying on compass readings in navigating the Sound.

1969); *Russell, Poling & Co. v. United States*, 151 F. Supp. 11, 14-15 (S.D.N.Y. 1957), *aff'd*, 252 F.2d 167 (2d Cir. 1958). As District Judge Tenney observed in *Afran Transport Co. v. United States*, *supra*, 309 F. Supp. at 654,

Once the Coast Guard "exercised its discretion to . . . [established a buoy . . .] and engendered reliance on the guidance afforded by the . . . [buoy], it was obligated to use due care to make certain that the . . . [buoy] was kept in good working order." *Indian Towing Co., Inc. v. United States*, [*supra* at 69]. If the buoy moved from its chartered position, "the Coast Guard was further obligated to use due care to discover this fact and to . . . [restore it to its charted position] or give warning" *Indian Towing Co., Inc. v. United States*, *supra* at 69 (textual brackets in original).

In the present case, it is eminently clear that the Coast Guard personnel on the COWSLIP, who were responsible for servicing the Hussey Sound buoys on July 20, failed to use care to make certain that Buoys No. 3, No. 6 and No. 7 were on their charted positions.³⁹ It is equally clear that but for the negligence of the Coast Guard in failing to maintain these buoys on-station, the TAMANO would not have grounded on Soldier Ledge. Under the circumstances, the United States is solely liable for the striking of the TAMANO and the resulting damages.

³⁹ The instant case does not present the question (presented in *Russell, Poling & Co. v. United States*, *supra*) of whether the Coast Guard failed to use due care to discover that a buoy was off-station. As the court recognized in *In re Inland Towing Corp.*, *supra*, 307 F. Supp. at 880,

While it is usually necessary to prove the government had either actual or constructive notice of the fact a channel

Fault of Tamano-Pilots. The United States contends that even if Buoy No. 6 was off-station, this was merely a condition and not a cause of the TAMANO casualty. The government's position is that the sole cause of the striking was the negligent navigation of the TAMANO by Captain Dunbar and the ship's crew. The Court is persuaded, however, that the casualty was not caused by any negligence of Captain Dunbar or the TAMANO.

The Court will consider separately each of the grounds upon which the United States asserts that negligence of Captain Dunbar or the TAMANO was a cause of the striking.

The Alleged Negligence of Captain Dunbar

(1) The United States' principal claim is that Captain Dunbar navigated solely by "seaman's eye" and relied upon Buoy No. 6 being in its chartered position rather than upon radar fixes and bearings from fixed landmarks. But there is no evidence in the record that Captain Dunbar had any reason to suspect that Buoy No. 6 was off-station, and it is now well established that "in the absence of some suspicious circumstance or notice, navigators are entitled to rely upon the representations made in Government charts relative to the location of the buoys." *Afran Transport Co. v. United States*, *supra*, 435 F.2d at 215-16 (and cases there cited). Thirty-six hours before the casualty, Captain Dunbar had observed the COWSLIP servicing the buoys in Hussey Sound, and on the previous afternoon he had been officially advised that their locations had

marker was not in place, in order to sustain a claim of negligence, [Russell, Poling & Co., *supra* at 170] where the government has created the negligent act such notice would be presumed.

been verified. In such circumstances, "[s]urely it was not unreasonable for a professional pilot, with knowledge of the duties of those in charge of these Government vessels with respect to floating aids to navigation, to assume that, in the absence of some notification to the contrary, or some storm or other known incident to account for displacement, the buoy was in its chartered position." *Id.* at 216. Indeed, the United States' own expert witnesses, Captain Young and Captain Stap, testified that in light of the Coast Guard's verification of their location, they would have relied on the Hussey Sound buoys on the night of July 22 in transiting the Sound, and Captain Leland Pearson, a professor of nautical science at the United States Merchant Marine Academy, Kings Point, New York, who was also presented by the government as an expert navigational witness, testified that he "would be tempted to" rely on a buoy which the Coast Guard had so recently checked. Plainly, Captain Dunbar's decision to rely on the buoys and to start the starboard turn toward Buoy No. 6 when he did cannot be faulted. *Cf. Universe Tankships, Inc. v. United States*, *supra*, 336 F. Supp. at 294; *Russell, Poling & Co. v. United States*, *supra*, 151 F. Supp. at 16-17.

(2) The United States argues that if Buoy No. 6 had been some 300 feet off-station, Captain Dunbar, as an experienced pilot with local knowledge, should have realized this fact and taken immediate steps to ascertain his true position. As the Court has previously observed, however, Captain Stap testified that a pilot could not have detected by eyesight at night that Buoy No. 6 was 300 feet off-station, *cf. Afran Transport Co. v. United States*, *supra*, 435 F.2d at 216, and the change

in orientation resulting from the COWSLIP's mispositioning of Buoy No. 7 on July 20 adequately explains the reason Captain Dunbar did not detect that Buoy No. 6 was off-station.

(3) The United States contends that when Captain Dunbar had a "funny feeling" that Buoys No. 6 and No. 7 were opening prematurely, he should immediately have ascertained his position by a radar fix. But it seems evident that the short period of time as the TAMANO approached Buoy No. 6 precluded a radar fix of the vessel's position. Captain Dunbar had only seconds to make a decision and was aware that if he held on his 310° course too long, the TAMANO would ground on Peaks Island. As Captain Stap conceded, there was simply no time for a radar plot. *Cf. Afran Transport Co. v. United States, supra*, 309 F. Supp. at 659. And even Captain McNaughton agreed that when the buoys opened prematurely, he would have initiated the starboard turn.

(4) The United States asserts that when the buoys appeared to be opening prematurely, Captain Dunbar should have taken a "danger bearing" on Crow Island Light, which was dead ahead while the TAMANO was on the 310° course from Buoy No. 3. The record, however, does not support the government's contention that Captain Dunbar should have used Crow Island Light as a navigational aid. Crow Island Light was over 2000 yards distant from the TAMANO, and the evidence is that the light was almost extinguished and was barely visible. Captain Howard L. Wentworth, Jr., an experienced Portland pilot, testified that it was too dim to use, and, again, Captain Stap admitted that in such circumstances he would not have used it.

(5) The United States strenuously argues that by hitting Buoy No. 6, the TAMANO violated 33 U.S.C. § 201 and 33 U.S.C. § 408, and that the violation of these statutes constituted such statutory faults as to make applicable the drastic rule of *The Pennsylvania*, 86 U.S. (19 Wall.) 125, 136 (1873). If the *Pennsylvania* rule is applicable, the TAMANO would have the burden of proving that the statutory violation not only might not or probably did not, but that it *could not*, have contributed to the casualty.

33 U.S.C. § 201 provides:

Suggestion for ascertainment of risk of collision

Risk of collision can, when circumstances permit, be ascertained by carefully watching the compass bearing of *an approaching vessel*. If the bearing does not appreciably change, such risk should be deemed to exist. (emphasis supplied).

33 U.S.C. § 408 provides in pertinent part:

Taking possession of, use of, or injury to harbor or river improvements

It shall not be lawful for any person or persons to take possession of or make use of for any purpose, or build upon, alter, deface, destroy, move, injure, obstruct . . . , or in any manner whatever impair the usefulness of any . . . buoys, or other established marks

The United States says that the TAMANO violated Section 201 because Captain Dunbar admits having maintained a constant compass bearing as he ap-

proached Buoy No. 6, and that the TAMANO violated Section 408 by hitting Buoy No. 6. It is clear, however, that neither of these statutes is the type of statute violation of which invokes the *Pennsylvania* rule. The doctrine of *The Pennsylvania* is applied to violations of statutes and regulations which impose a mandatory duty to prevent collisions. *Afran Transport Co. v. United States*, *supra*, 309 F. Supp. at 655-56, 435 F.2d at 218-19.⁴⁰ Section 201 in terms refers only to two vessels in motion, but even if it could read as applicable to a vessel approaching a stationary buoy, it does not prohibit or mandate any particular conduct; it merely provides a cautionary rule. *See Afran Transport Co. v. United States*, *supra*, 435 F.2d at 219. Similarly, Section 408, rather than establishing a mandatory duty designed to prevent collisions, is a part of the Rivers and Harbors Act, 33 U.S.C. § 401 *et seq.*, and is "one of a number of general provisions relating to the preservation and protection of public works in navigable waters." *United States v. The S.S. American Hunter*, 192 F. Supp. 447, 449 (S.D.N.Y. 1961). *See*

⁴⁰ In *Afran Transport Co. v. United States*, *supra*, 435 F.2d at 218-19, Circuit Judge Medina summarized the circumstances and the types of statutes to which the *Pennsylvania* rule applies:

The doctrine of *The Pennsylvania* has been applied to a great variety of situations, involving regulations as well as statutes. Nor does the rule affect collision cases only. It is the essence of all these cases that the statute or regulation be mandatory in character, as the rule is designed to compel compliance with clearly defined duties. Typical instances are mandatory directions with reference to lookouts, fog signals and the carrying of lights at night. When the statute or regulation is in terms of cautionary suggestions only, then the alleged failure to take certain precautions in certain given situations is absorbed into the ultimate finding of fault or negligence or the absence of fault or negligence contributing to the loss and damage involved in the particular case. (footnotes omitted).

also United States v. The Tug Terry E. Buchanan, 138 F. Supp 754, 755-56 (S.D.N.Y. 1956); *The Barbara Cates*, 17 F. Supp. 241 (E.D. Pa. 1936).

The TAMANO was guilty of no such statutory fault as to invoke the *Pennsylvania* rule.

(6) Finally, the United States argues that even if the *Pennsylvania* rule is inapplicable, Captain Dunbar was guilty of negligence which was a proximate cause of the casualty when he failed to give Buoy No. 6 sufficient clearance and hit the buoy. The evidence, however, abundantly supports the conclusion that it was the Coast Guard's misplacement of Buoy No. 7 which changed the pilot's perspective and caused Captain Dunbar to commence the starboard turn too soon, and thereby to graze the buoy. The expert navigational witnesses agree that once the TAMANO was committed to the starboard turn, contact with the buoy was inevitable. Moreover, even if it could be said that Captain Dunbar was negligent in providing inadequate clearance of the buoy, it is undisputed that if the buoy had been on its charted position, the TAMANO would have passed to the west and well clear of Soldier Ledge. In such circumstances, it cannot be said that the fact Captain Dunbar grazed the buoy was a proximate cause of the grounding.⁴¹

The Alleged Negligence of the TAMANO

(1) The United States charged that the master of the TAMANO, Captain Bjornnes, was negligent in

⁴¹ It also seems evident that, since the TAMANO was holed 17.6 feet inboard from the starboard side, the vessel would have struck the Ledge even if she had cleared the buoy by as much as 10 to 15 feet.

failing adequately to prepare himself for the entry into Hussey Sound by obtaining current navigational data and in failing to establish a bridge watch equipped to man the vessel's navigational aids and to assist Captain Dunbar in his transit of the Sound. The evidence, however, wholly fails to show that any of the master's alleged lapses was causally related to the casualty. There is thus no basis in the record for concluding that any failure of the TAMANO's master to prepare for the passage through Hussey Sound was a proximate cause of the striking.

(2) The United States faults Captain Bjornes, and Captain Dunbar, for bringing the ship through Hussey Sound at night on an ebb tide when the buoys were the only available navigational aids, arguing that the master should have delayed the entry until daylight and high tide. The record shows, however, that at the time of the TAMANO's transit, pilots customarily brought tankers of the TAMANO's size through Hussey Sound at night on a low tide and neither the Coast Guard nor any other official agency had objected to the practice. Moreover, the United States presented no evidence to contradict Tamano-Pilots' testimony that even in the daytime the pilot relies almost exclusively upon Buoys No. 3, No. 6 and No. 7 when navigating the Sound. In short, the record does not support the United States' contention that the TAMANO created an "inherently dangerous" condition by coming through Hussey Sound when it did.

(3) The United States contends that the TAMANO was negligent because of the failure of the bridge watch to participate actively in the navigation of the vessel and to assist the pilot in his transit of Hussey

Sound. There is no evidence, however, that the bridge watch was incompetent or inexperienced, or that the officers and crew did not do everything requested of them by Captain Dunbar. The United States concedes that Captain Bjornes had no occasion to relieve Captain Dunbar as the pilot. And the United States has wholly failed to establish anything that the master or the bridge watch could or should have done to discover that Buoy No. 6 was off-station or to warn Captain Dunbar of the approaching peril.

• • • •

On the entire record, the Court has concluded that the striking of the TAMANO on Soldier Ledge was not caused by any negligence of Captain Dunbar or the TAMANO, and that the sole cause of the casualty was the negligence of the United States Coast Guard in failing to maintain Hussey Sound Buoys No. 3, No. 6 and No. 7 in their charted positions.

CONCLUSIONS OF LAW

The Court's conclusions of law are:

1. This Court has jurisdiction of the actions and of the parties thereto. 28 U.S.C. §1333(1); 28 U.S.C. §§ 1346(b), 2671-80.

2. The sole proximate cause of the grounding of the TAMANO was the negligence of the United States Coast Guard in failing to maintain Hussey Sound Buoys No. 3, No. 6 and No. 7 in their charted positions. *Indian Towing Co. v. United States*, 350 U.S. 61 (1955); *Afran Transport Co. v. United States*, 309 F. Supp. 650 (S.D.N.Y. 1969),

aff'd, 435 F.2d 213 (2d Cir. 1970), *cert. denied*, 404 U.S. 872 (1971).

3. The United States is solely liable for the grounding of the TAMANO and the resultant damages. *Idem*.

DIRECTION FOR ENTRY OF JUDGMENT

In accordance with the foregoing Findings of Fact and Conclusions of Law, it is

ORDERED, ADJUDGED and DECREED:

- (1) That in these consolidated actions final judgment be entered in favor of Tamano-Pilots against the United States dismissing all claims, cross-claims, counterclaims and third-party claims of the United States against Tamano-Pilots, with prejudice;
- (2) That in these consolidated actions an interlocutory judgment be entered in favor of Tamano against the United States in an amount to be agreed upon by the parties within 60 days, or if the parties are unable to agree, in an amount to be determined by the Court after hearing.

Dated at Portland, Maine, this 3rd day of October 1975.

/s/ EDWARD T. GIGNOUX
United States District Judge

APPENDIX B

UNITED STATES COURT OF APPEALS FOR THE FIRST CIRCUIT

No. 76-1020

ERNEST E. BURGESS ET AL.,
PLAINTIFFS,

v.

M/V TAMANO ET AL.,
DEFENDANTS, APPELLEES.

UNITED STATES OF AMERICA,
APPELLANT.

APPEAL FROM THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MAINE

[HON. EDWARD T. GIGNOUX, U.S. District Judge.]

Before COFFIN, Chief Judge,
ALDRICH and CAMPBELL, Circuit Judges.

Allen van Emmerik, Attorney, United States Department of Justice, with whom Rex E. Lee, Assistant Attorney General, Barbara Allen Babcock, Assistant Attorney Gen-

eral, *Peter Mills*, United States Attorney, *Leonard Schaitman*, and *Emmett B. Lewis*, Attorneys, United States Department of Justice, were on brief, for appellees.

Joseph C. Smith and *Benjamin Thompson*, with whom *David P. Cluchey*, *Thompson*, *Willard & McMaboe*, and *Burlingham*, *Underwood & Lord* were on brief, for appellees.

August 24, 1977

ALDRICH, *Senior Circuit Judge*. This appeal is from a finding of the district court for the District of Maine imposing upon the United States sole liability for a supertanker's striking a submerged ledge, and a consequent oil spill. The government denies fault, or, at the least, asserts that the fault was not its alone, and contends that the district court's contrary findings are clearly erroneous.

On July 22, 1972, at 0120 A.M., on a clear night, the Norwegian supertanker M/V TAMANO struck Buoy 6, a lighted buoy marking Soldier Ledge in Hussey Sound, Casco Bay, Maine, and seconds later grazed the ledge, holding her hull, and losing 100,000 gallons of heavy oil into the Bay. The TAMANO is a single screw vessel, 810 feet long, 128 foot beam, and was drawing 44 feet. In the modern style, her bridge is aft; the helmsman stands 650 feet from the bow. Her command was Captain Bjornes, and she was being piloted by Captain Charles Dunbar, of Portland Pilots, Inc. Although the occurrence resulted in numerous lawsuits, in the present appeal appellees ship, and her owners, and the Pilots, are principally plaintiffs, and will be referred to as such, and appellant United States, charged with having caused the accident by mislocating

the buoy, is the defendant. In a counterclaim, to be considered separately, the parties are reversed.

Hussey Sound is the approach to the Portland oil anchorage, and runs essentially northwesterly. It is marked, basically, by three lighted buoys, originally numbered 1, 4 and 5, and numbered at the time of the event, 3, 6 and 7. No. 3 is a green flashing gong buoy at the entrance, marking shoal ground easterly of Peaks Island, which constitutes the westerly side of the Sound. No. 6 is a red flasher marking Soldier Ledge in the middle of the Sound, and No. 7 is a white flashing bell, easterly of Pumpkin Nob, further up. The Sound is a gut, and one could enter just easterly of Buoy 3 and proceed 1700 yards 320° (true) to the same distance easterly of Buoy 7, passing just westerly of Buoy 6, 1250 yards along the way. This description is taken from the charted position of the buoys, and is not exact, if only because the scope of their mooring chains permits the buoys to swing with the tide. This is too tight a procedure for large vessels. Their practice is to enter well easterly of Buoy 3 and proceed on a course less than 320°, and then take a starboard curve around Buoy 6 and thence, approximately 350°, to pass clear of Buoy 7. A swing starting too soon after leaving Buoy 3 could strike Soldier Ledge; too late would fetch the shelving ground making out from Peaks Island and Pumpkin Nob.

The space between the 10 fathom curve on the chart west of Soldier Ledge and the 10 fathom curve east of Peaks Island provides a channel 300 yards wide. In order to permit the maximum room for making the turn, Portland Pilots in 1967 persuaded the Coast Guard to move

Buoy 6's station 150 feet easterly towards Soldier Ledge to a position "on the southwest tangent of the Ledge [because] we need every foot of channel room available." This put it so close that the court found that if its mooring, or sinker, was on station on the night in question, a 350° line from the buoy itself would pass only 22 feet clear of the ledge. Under some circumstances, the buoy's floating position might be even closer.

Two days before, on July 20, 1972, the Coast Guard COWSLIP, a 180-foot buoytender, placed two additional buoys at the outer approaches to the Sound, and serviced and renumbered the existing buoys as 3, 6 and 7. The following day the Coast Guard notified Portland Pilots of the new buoys and the renumbering of the old ones, and the fact that it had verified their positions. That night the TAMANO, with Captain Dunbar aboard, left the vicinity of Portland Lightship at 2335 and headed for the Sound. The sea was calm, there was no wind, and upon the quick disappearance of a light fog, it was dark and clear. After passing easterly of Buoy 3 at 0113 at a distance of 450 to 600 feet, Captain Dunbar steadied on a 310° course and then watched the relative motion of Buoys 6 and 7 as he approached to determine when to begin his starboard turn around Buoy 6. It was then about two hours before low water and the current was ebbing out the Sound at $\frac{3}{4}$ to 1 knot, about 154°. About four minutes after passing Buoy 3, Captain Dunbar got a "funny feeling" that Buoys 6 and 7 were opening sooner than he had expected. Fearing that he would run too far to the west and run aground off Peaks Island, he began his starboard turn, keeping Buoy 6 "fine off the bow," intending to pass close

to it. About three minutes later, although unaware of doing so, he struck the buoy, which had been lost sight of by the bridge complement because of the flare of the ship's bow. The buoy was brushed aside and passed along the starboard side of the ship, where it was then seen. Captain Dunbar stopped the engines to avoid fouling the buoy's chain, and as the buoy passed astern put the engines back full ahead and proceeded on a 350° course up and out of the Sound. It was not until they reached the anchorage that it was discovered that oil was leaking from the No. 1 starboard wing tank. Even then they did not realize they had grazed the ledge. The boatswain, who was standing in the bow, had reported the striking of the buoy, and the officers accordingly assumed that the buoy had holed the vessel. In point of fact, little appreciable damage was caused by, or to, the buoy. A long, straight gash was made by the ledge.

Government Fault — The Evidence

To commence with historical facts, when the COWSLIP serviced the Hussey Sound buoys on July 20, it believed Buoys 3 and 7 to be wrongly positioned, and moved them. In so doing it left Buoy 3's sinker about 130 feet northeast, and Buoy 7's about 175 feet northwest, of their charted stations. It did not move Buoy 6, believing it to be on station. The ultimate question upon which government liability depends is whether Buoy 6's sinker was in fact in its charted position ("C"), or was some 215 feet southeasterly thereof, in the position found by Wright ("W"), a professional surveyor, shortly after the casualty. We may say, in anticipation, that because of the demonstrated incompetence of the COWSLIP's new offi-

cers, no weight can be attached to their July 20 verification.¹

By a singular circumstance, but based upon an elaborate reconstruction which the court warrantably accepted, if the TAMANO merely grazed the buoy, as the court found, the fact that she struck Soldier Ledge where it was found to be "coppered" meant that the buoy was in position "W," but if the buoy's initial contact was 39 feet inboard by the anchor, where the boatswain testified, this corresponded with its being at "C." In a sense, therefore, the case turns entirely upon the acceptance, or rejection, of the boatswain's testimony.

After the ship entered the Sound, Bos'n Hanssen, whose duty would be to let down the anchor, proceeded to a platform at the starboard side of the forward end of the fore-castle. He was not a bow watch, and all he did initially, as the court found, was to "relax" while "awaiting orders."² He suddenly observed the flash of Buoy 6, 30-40

¹ The district court found,

"[T]he record is replete with evidence of the COWSLIP's ineptitude in setting and verifying the positions of the Hussey Sound buoys on July 20. The COWSLIP's navigational personnel were grossly lacking in experience."

It could have said more. The government has spent an inordinate amount of time, by brief and oral argument, attacking this finding, which is not only not clearly wrong, but is clearly correct. Nor, of course, was it the first time the Coast Guard has been charged with a misplaced buoy. *E.g.*, *Afran Transport Co. v. United States*, 2 Cir., 1970, 435 F.2d 213; *Richmond Marine v. United States*, D.S.N.Y., 1972, 350 F.Supp. 1210; *Universe Tankships, Inc. v. United States*, E.D.Pa., 1972, 336 F.Supp. 282 (improper buoy tendering). The government does not question that Coast Guard error in this regard can impose liability. Cases, ante.

² There was no bow watch. The starboard bridge watch, one Garcia, was not called by the ship, for reasons that do not appear.

meters ahead, in a position he thought at first would escape collision. However, it did not, but came, he said, in contact with the ship's bow just below the starboard anchor, then tilted part way over and proceeded down the side. He thought he heard it strike twice again, but this was out of his sight.³ The court believed Hanssen that the buoy was struck—and disbelieved Captain Dunbar that "we never came within, I would judge, 5 feet of it"⁴—but concluded that Hanssen, although the only witness, was wrong as to the location, and that instead of striking inboard by the anchor the buoy merely "grazed" the ship.⁵

³ Hanssen stated unreservedly that he saw the initial contact, and that he assumed later sounds (one of which, it seems, may have been the ship scraping the ledge) were subsequent contacts. The court's summary was as follows.

"Hanssen claims that he saw the Tamano hit the buoy under the starboard anchor. He also claims to have heard the Tamano hit the buoy a second time in the vicinity of the aft end of the fore-castle, and a third time further aft, as the buoy scraped the Tamano's side and hit the accommodation ladder."

To apply the words "claims" indiscriminately to these two aspects of Hanssen's testimony minimized the reservations the witness himself made with impressive particularity.

⁴ A contention the court found "incredible" in view of the seven-layer chips of paint found on the buoy's platform, the composition of which precisely matched samples taken from the ship's bow.

⁵ "13. The court rejects the contention of the United States that the Tamano struck Buoy No. 6 under its starboard anchor 39 feet inboard of the starboard side. The Court also rejects the contention of Tamano-Pilots that the Tamano did not strike Buoy No. 6. While the evidence clearly supports the conclusion that the Tamano contacted the buoy, it is most consistent with a finding that the contact was slight and that it occurred at a point much closer to the outer edge of the bow, most likely at the point where the bow begins to taper off into the flat side of the ship."

"Hanssen's testimony . . . was substantially shaken on cross-examination."²⁴

²⁴ Hanssen did not testify in person at the trial, but his deposition was made part of the record. On cross-examination he admitted that he did not actually see the buoy strike the Tamano's bow. His cross-examination further developed that he was alleged to be drunk, had numerous axes to grind, and was considered unreliable. He was also unable to explain why he had failed promptly to report to the bridge that the vessel had hit the buoy and did not mention this fact until ten minutes later when Storheil came forward to supervise the anchoring."

The source for most of this, however, was only counsel. In his closing argument one of plaintiffs' counsel, whose anxiety to dispose of Hanssen is understandable, but whose disregard of the record is less so, said the following.

"[The government's] whole case is predicated on one man's testimony, Hanssen, who was completely unreliable. He was alleged to be a drunk; he had all kinds of axes to grind; his cross-examination destroyed his credibility."

Starting with its footnote 24, ante, the court was, of course, correct that Hanssen testified only by deposition—meaning that it could not observe his courtroom demeanor. The next statement, that "he did not actually see the buoy strike the . . . bow" is true only in a very limited sense—

that he did not see the precise physical contact.⁶ Totally untrue is the court's statement that "he was alleged to be drunk." To be drunk at the time would cast a serious reflection on Hanssen's testimony. There was no such allegation, let alone evidence in support.⁷ As to "numerous axes to grind," no witness suggested this. Counsel's sole support was his own suggestion, that Hanssen may have been vindictive because he had been posted for drinking. By Norwegian regulations, Captain Bjornes was obligated to post him. There was no evidence that Hanssen felt it unwarranted, far less that it furnished him with "all kinds of axes." Hanssen was hoping for continued employment; if he had any axe, it was not to swing against the ship.

The court's statement that Hanssen was "considered unreliable" was, again, made up out of whole cloth, unless

⁶ XQ, "You don't know what part of the buoy hit the ship; is that what you are saying?" A. "Yes, I mean that it had to be up here, [diagram] but it went so fast." This did not detract from what Hanssen said on a number of occasions as to where was "up here." E.g., A. "I saw that the buoy struck the vessel on the starboard side, in the vicinity of the anchor; and, after that, I ran and I stationed myself at the anchor to be ready." While he also testified that he saw the buoy "hit the anchor," it seems clear that he regarded this as equivalent. Q. "What part of the ship first struck the buoy?" A. "The starboard anchor, below the starboard anchor." The difference was a matter of height above the water, not location vis-a-vis the center line of the ship. See testimony of Chief Officer Steinsvaag, corroborating Hanssen, post.

⁷ What was in the record was plaintiffs' counsel's accusation that he was "a drunk"—a quite different matter, and untrue at that. Hanssen had been drunk eight days previously. Captain Bjornes said that it might have happened once, but no more than once, before. While we do not award Hanssen a temperance medal, this is a slender stick with which to beat a witness, particularly to imply, what the court seemingly inferred, that he was drunk that night when sent forward by his superior to tend the anchor.

restricted to what plaintiffs' counsel may have personally considered. Put to it to justify their charge that Hanssen was "completely unreliable," plaintiffs' brief can only assert that Hanssen was restricted from certain activities because his "vision was suspect." The "suspect[ed]" defect was that, since 1956, he had had color impairment. He had been a boatswain for ten years, and his duties were to "[p]ut the men to work." This is scarcely consistent with complete unreliability. Nothing in the record supports this serious charge, or the court's acceptance thereof.

Next, we can see no relevance in Hanssen's being "unable to explain why he failed promptly to report to the bridge" the fact they had hit the buoy. In the first place, he did explain—that he was not the lookout, and that he assumed the bridge had seen it, which caused him to run to his position to stand by for orders to anchor. We may add that if there had been any further duty, the fact of contact, not the exact spot, would seem the reportable emergency. The same must be said with respect to the court's criticism of Hanssen for "not mention[ing] this fact until ten minutes later when Storheil came forward to supervise the anchoring." Perhaps because it confused First Officer Storheil with Chief Officer Steinsvaag, the court failed to note here, or elsewhere, that Officer Steinsvaag, the one to whom he did speak, testified that Hanssen told him, "It hit under the anchor. . . . He said on the starboard side, under the anchor." It is difficult to think that this unbiased, prompt corroboration of Hanssen's exact account, made at a time, when there could have been no appreciation of the significance of the precise location, was not worthy even of mention when weighing Hanssen's credibility.

Finally, we return to the text of the court's opinion, to which the foregoing was attached as explanatory footnote 24, that Hanssen "was substantially shaken on cross-examination." We have read his deposition with care, and find it straightforward and direct, even painstaking. It was not shaken by anything recited in the court's footnote, nor by anything else.

Hanssen was on a platform by the bow. He was an experienced seaman. Totally alert, when he saw they were about to strike, he "lean[ed] over the rail" to see. The anchor was to his left. The outer part of the bow, where it blends into the side of the ship, viz., where the court's "grazing" must have occurred, was not only on his other side, but, as the exhibits show, considerably astern of him. We can understand why plaintiffs would like the court to believe he was drunk, prejudiced and unreliable. These charges being totally unsupported, we share the government's feeling that the only basis for rejecting Hanssen's account could be that the evidence that the buoy was off station was so compelling that, somehow, he had to be wrong.

Because the court did not assert reliance on it, we deal only briefly with a matter made much of at the trial, Captain Dunbar's "funny feeling" that Buoys 6 and 7 were opening prematurely.* The court found that Captain Dun-

* At the expense of stating the obvious, as one on a straight course approaches, and passes by, a fixed object, the object appears to move from whatever position it was initially off the bow towards the beam, and, ultimately, off the stern. At first, if the object is far ahead, the bow angle changes slowly, but the change accelerates as one comes nearer. Thus, in the case of two buoys off the starboard bow, such as Buoy 7, relatively far ahead, and Buoy 6, much closer, the angle of Buoy 7 changes slowly, and the angle of Buoy 6 comparatively rapidly, causing the difference,

bar felt "that the vessel had not been on the 310° course long enough for the buoys to be opening." This would be consistent with Buoy 6's sinker being at position "W," 215 feet southeasterly of "C," and almost correspondingly nearer to where Captain Dunbar believed himself to be. But equally it would be consistent with Captain Dunbar himself being further ahead than he thought.

At night Captain Dunbar had no landmarks to guide him—only the buoys, and, as plaintiffs' counsel put it in oral argument, "a time clock in his mind." In point of fact, the clock was improperly programmed. Captain Dunbar estimated his speed at $5\frac{1}{2}$ knots. Based on the testimony of the ship's officers, and the arrival time at the anchorage, the court found the speed to be 6-7 knots. An underestimate of only $\frac{1}{2}$ knot for the four minutes would account for a 200 foot variance in the ship's position. We do not pursue this matter except to observe that under the circumstances Captain Dunbar's funny feeling would seem due to misplacing himself, rather than attributable to a 215 foot misplacement of the buoy.

The matter apparently troubling the court the most about Hanssen's testimony, apart from its found inherent defects, was that his location of the contact was "inconsistent with the uncontroverted physical evidence of the minimal damage to the buoy found following the casualty. . . . The probabilities are convincing that [for Tamano to strike the] buoy bluff on its bow would have badly dam-

or the angle between them, to "open up." The closer to Buoy 6, the faster the opening. Conversely, to maintain an object at a constant angle off the bow would require a slow turn, or curve, which must increase as one approaches.

aged, if not destroyed, the buoy body, cage, protective ring and light."

Plaintiffs' counsel likened this to an automobile striking a brick wall. A government expert said this was an incorrect comparison.

"[T]hat's a different thing altogether. That's not—that's permanent, solid, that's not drifting. A buoy is almost drifting because you can hit a buoy and she will go with you."

All government witnesses testified that substantial damage is by no means inevitable, for this reason, and because of the cushioning, or sidesweeping effect of the bow wave, or pressure gradient.

Although the court realized to some extent that this was the government witnesses' position, it went on to say, "all three conceded the likelihood that the buoy would have sustained more damage than it did." To this, after referring to the testimony of the plaintiffs' expert, post, it added,

"In short, *all four experts concur* that the damage observed on the buoy after the casualty was far less than that which they would have anticipated from the collision described by Hanssen." (Emphasis supplied.)

Not only was there no concurrence, this appraisal was incorrect as to all four of the witnesses.

Captain Young testified that because of the buoy's yielding, ante, he would not expect it to be damaged at all. Captain Stap testified, Q. "Would you expect the buoy by reason of that collision to be damaged in any particular way?" A. "No." He added, "You might knock off the

radar reflector. You might at times even knock the light out, but I have run over buoys recently and they are still lit. . . ." Captain McNaughton testified, "[Y]ou could certainly have damaged the radar reflector and so on, but as far as damaging the buoy competely so that it would sink, no, it would just roll down along the side of the ship." No cross-examination reduced any of this testimony.

Finally, the court substantially overstated the evidence offered by plaintiffs' expert in rebuttal.

"The single navigational expert called by TAMANO-Pilots on this point, Captain Arthur H. Fertig, testified that the buoy would have been competely destroyed as a result of the impact."

Captain Fertig expressed no such opinion. His sole testimony was that he had had one experience, and that this was what happened. A single occurrence is no basis for a finding of probabilities. Far more impressive is the fact that, although he was their own expert, and provided an opportunity to contradict the government's plaintiffs refrained from asking for an opinion as to probabilities. Instead, counsel supplied it themselves.⁹

One witness did support plaintiffs on this subject, Professor Hamilton, a professor of naval architecture. He was not a "navigational expert," and testified to no actual experience with striking buoys, nor to any scientific analysis or experiments. Instead, he was prepared to general-

⁹ "[N]ot [to] have any real bad damage to the buoy . . . defies all reason." "Captain Fertig said when it happened to him it decimated (sic) the buoy, and I have no doubt in my mind that's what would happen."

ize, drawing an analogy with butterflies striking the windshield of a fast moving automobile.

"I can't conceive of a ship with this fullness of bow hitting a buoy of this nature at 7½ knots at that angle on the waterline without substantial damage incurred by the buoy."

The court disbelieved this. "[I]t is possible that the Tamano might have hit the buoy under her starboard anchor without causing substantial daamage. . . ."

Thus, four qualified and experienced captains, rather than testifying that the probabilities pointed to substantial damage to the buoy, testified, in effect, that consequences to a struck buoy are problematical and a matter of chance. In this circumstance it was a considerable stretch for the court, solely on the failure of a naval architect to conceive that there would not be substantial damage, to find that "[t]he probabilities are convincing [that the buoy would have been] badly damaged, if not destroyed." We can only think that it did so as the result of having misstated what it recognized as the navigational experts, and having been persuaded of the "high probability" of snagging by counsel's horizontal mooring chain demonstration.

Counsel's ability to supply favorable answers to questions he never asked peaked again with respect to the mooring chain and the claimed consequences to the buoy had it been struck in the manner Hanssen testified. The court found,

"At oral argument, Pilots' counsel also persuasively demonstrated the high probability that if the buoy had been struck by the Tamano on the starboard

bow where Hanssen says he saw it . . . the Tamano's bulbous bow would have snagged the buoy's chain and carried the buoy and the sinker with it, causing very substantial damage to the buoy."

This persuasive demonstration consisted of drawing across the bow profile of Tamano's hull that was in evidence a buoy, and a line therefrom, representing the mooring chain, at almost horizontal angle.¹⁰ We may agree that, given the mooring chain so positioned, counsel's demonstration would have been persuasive.¹¹ What is notable, however, is that counsel had neglected, both in cross-examination of the government witnesses, and direct examination of his own, to make this demonstration through an authoritative source. The reason is not far to seek—the witnesses would have felt bound by the evidence. A mooring chain is not like a plastic rope, which, with the pull of the current, might extend in a flattened curve from the sinker to the buoy. Rather than as counsel depicted it, because of its great weight and the relatively light pull of the buoy the chain would extend along the bottom until it finally rose to the buoy. The uncontroverted evidence showed that in a modest current the ascending angle of

¹⁰ With some candor, counsel conceded that his chain did "not extend down the way one of the witnesses said it would have." With greater candor he should have said that no one but himself had contradicted the witness.

¹¹ "[I]f the buoy is on the starboard bow where Hanssen says he saw it, the sinker is on the port bow; that means that with the bow the way it is shaped in the prole there's just no way that that ship is going to go forward [across the chain] and not carry the buoy and the sinker with it and cause very, very substantial damage to the buoy."

the chain is but a small departure from the vertical. A picture may be worth a thousand words, but not one drawn by counsel without the words to back it up. The demonstration was worthless. Professor Hamilton's testimony, in the face of the navigational experts, stands but little better. We cannot support the Court's probability binding even if hypothetical probability would be enough to offset factual testimony of an eyewitness. *Cf. J. Gerber & Co. v. S.S. Sabine Howaldt*, 2 Cir., 437 F.2d 580.

A matter of more serious consequence to the government, absent an explanation, is the admitted fact that the sinker was found about 215 feet southeasterly of its charted position shortly after the event. The government did furnish an explanation, but the court did not accept it. The government called a Professor Breslin, whom the court described as "unquestionably a distinguished naval architect and hydrodynamicist." Dr. Breslin testified to elaborate computations based upon the dimensions of the ship, its propeller, etc., and of the buoy, and gave an opinion that the force of the wake upon the buoy would be sufficient to dislodge the sinker and drive it astern, viz., in the direction away from its charted position that it was in fact found. The thrust of TAMANO's propeller was sufficient to move against the current at 6-7 knots over the bottom (due to a more modest input, Dr. Breslin's computations had been on an assumption of 5½ knots through the water) a hull with a displacement of 128 foot beam and 44 foot draft. If plaintiffs' expert, Professor Hamilton, could quarrel with Dr. Breslin's opinion of the force upon, and the consequences of the wake to, a buoy that was caught up in it, we may be sure he would do so. He made no at-

tempt to. The court, however, rejected Dr. Breslin's conclusions.

"While Dr. Breslin's hypothesis is not beyond the realm of possibility, it appears to be highly speculative and to be based upon several critical assumptions which are not supported by the record."

The court then listed four matters, two of which are really repetitious; the third was expressly rejected by Dr. Breslin, and the fourth, which the court described as the "most serious flaw," we find demonstrably irrelevant.

Dr. Breslin admitted to one vulnerability. If the buoy was more than about 10 feet abeam when it passed the stern, it is unlikely that it would be drawn into the wake. The court found the distance to be greater. Its analysis, however, in a number of respects conflicts with, in others ignores parts of, the record.

The court found,

"After grazing Buoy No. 6, the Tamano completed its turn and the buoy was 20 to 30 feet to starboard when it passed abeam of the bridge. The buoy was logged abeam the pilothouse at 0120. As the buoy passed down the Tamano's starboard side, Captain Dunbar stopped the vessel's engines to avoid having the buoy's mooring chain foul the propeller (0119.5). As the buoy passed clear aft, he put the engines Full Ahead (0120), [12] and steadied on a course of 350°.

• • • • •

¹² This seeming time discrepancy was due to a difference in the reading of the bridge and the course recorder clocks. This was not the only plaguing that came from the course recorder, upon whose reliability the court commented unfavorably.

"Dr. Breslin also assumed that there was no change in the Tamano's heading as the buoy passed down the vessel's side and that the ship's rudder remained amidship. The eyewitness testimony, however, discloses that the buoy was 20 to 30 feet to starboard when abeam the bridge; the stern of the vessel was moving away from the buoy; and the helm was not amidship when the Full Ahead order was given. Under these circumstances, it is highly dubious that the buoy could have been drawn in at a right angle to the vessel some 85 to 95 feet into the center of the propeller race at the point between 88 and 100 feet behind the stern where it would have been subjected to the 10,000-pound maximum force of the race. Dr. Breslin admitted that a port or starboard rudder would split and deflect the propeller race."¹³

To begin with the second paragraph, Dr. Breslin was not concerned with whether the vessel ran a straight course all the way from the point of contact with the buoy, but simply whether the buoy was close enough to the stern to be drawn into the wake—not at a right angle, but with the flow of water rounding the stern to fill in the space vacated by the ship. If the buoy was 20-30 away from the hull as it passed the bridge, and particularly if Captain Dunbar continued a starboard turn, which would swing his stern away from the buoy until it "passed clear aft," it would not have been so drawn. There are several vulnerable points in the court's findings, however. The first is internal inconsistency. Elsewhere

¹³ With respect to this last, Dr. Breslin did so testify, but it was not an "admission." He had stated that the maximum force was not needed, and testified specifically that there would still be ample left to accomplish the dislodgment. Moreover, in point of fact, the ship was then on a straight course. See post.

the court found, based on "uncontroverted testimony," "[T]he gyro reading as Buoy No. 6 passed abeam the bridge [was] the vessel's heading as she struck the Ledge." Even in the W position, the one further away, the ship had to have struck the ledge before her stern reached the buoy. The entire passage over the ledge was straight. Captain Dunbar could not have steadied his course as the buoy passed clear aft.

Of the court's several findings, if its above-quoted passages are analyzed, we prefer the one that Captain Dunbar completed his turn after striking the buoy, partly because it corresponds with the testimony of Captain Bjornnes, who said that the buoy maintained the same distance all along the side as the ship proceeded, and because it makes sense that he would not have continued to turn easterly after reaching a buoy he must have known was already as close to the ledge as was possible.

If the ship was on a straight course, granted that the bow wave could have pushed the buoy to one side, as Dr. Breslin recognized, the question is the accuracy of the court's finding that the buoy was 20-30 feet away at the bridge. The court's figure stretches the contemporary consulate declaration testimony of the ship's officers, one of whom estimated one meter, and the other about two fathoms, off the side, although, admittedly, at a later date he changed this to 18-24 feet, and, instead, accepts the highly interested testimony of Captain Dunbar.¹⁴ We need not question the captain's good faith, but he was vocal as to the amount of assistance his recollection received from counsel and his co-pilots. We may suspect that at the time of the incident he was more concerned

¹⁴ Not that we wish to split hairs, but it was not an accurate summary to take Captain Dunbar's figure, which was the highest of four witnesses, as "the eyewitness testimony."

about stopping the engines to avoid fouling his propeller and, notwithstanding the court's finding of an intention to hug the buoy within a few feet, post, more disturbed about being there at all, than he was in noting the exact distance of the buoy from the hull.¹⁵

The court's second reason for dismissing Dr. Breslin's opinion we have already disposed of. *See* n. 13, ante. Its final reason, which it terms the most serious, suggesting possible reservations about the correctness of the others, was totally inapplicable.

"The most serious flaw in Dr. Breslin's analysis, however, is that it provides no explanation for the undisputed fact that Buoys No. 3 and No. 7 were both found to be off-station by significant distances."

Rather than a serious flaw, this was no flaw at all. In no way did Dr. Breslin seek to explain the position of Buoys 3 and 7, and in no possible way did their position bear any relation to his calculations, or testimony. Dr. Breslin's sole concern was the effect of the propeller on Buoy 6.

Finally,¹⁶ in considering the likelihood, *vel non*, of Dr. Breslin's explanation, we note, if his testimony be rejected, the extraordinary coincidence that if the buoy was

¹⁵ For a striking illustration of Captain Dunbar's lack of memory of events concerning this incident, we note that when his deposition was taken he could not recall how long after he had stopped the engines so that Buoy 6 "could pass clear aft," he stopped his right turn and steadied his course. He believed it "a couple of minutes . . . a minute or two minutes," and that he did not straighten his course until after the buoy was astern. The time and distance were manifestly shorter.

¹⁶ We need not discuss the elaborate track records, constructed and presented by each side. The court amply pointed out the incorrect assumptions that went into each. While plaintiffs seek to capitalize on one point on which they coincide, we are not impressed by reasoning which would put two wrongs together to make a right.

not, in fact, moved by the ship, its unexplained extraneous movement off station happened to take precisely the direction that Dr. Breslin's hypothesis called for. In this circumstance, to discard his testimony because of the trial recollection of distance of plaintiffs' witnesses seems scarcely to follow probabilities. Yet their testimony, and specifically the enlargement over the consulate declarations when the officers' memories were still fresh, is the only one left of the criticisms advanced by the court. We cannot concur that Dr. Breslin's hypothesis was "highly speculative." Rather, everything considered, we believe the objection to be.

The court also relied on the testimony of one Pastore, a diver employed by plaintiffs to inspect Buoy 6's sinker on July 26. It was agreed that the sinker had not moved, unless by the TAMANO, between the time of servicing on July 20, and Pastore's inspection. Pastore found it upside down on rocky bottom in 120 feet of water, with no indication that it had recently moved. He based this conclusion on a swing around the sinker which showed "no indication of any movement," i.e., no disturbance. He was not asked on either direct or cross to give any further description or explanation of the bases of his opinion. He also found the bottom to be covered with rocks, with some sand and mud under the rock. Since the sinker had rolled, rather than dragged, *see post*, it is far from clear that such movement on such a bottom would have left any signs of disturbance. But we are not left to speculate since Pastore's further specific findings convincingly show that the sinker had indeed moved at some time after July 20.

Pastore found that the chain was wound three times around the sinker, so that of its 240 feet, only 175 feet were free. One may wonder what kind of force produced

this result. The government makes a further point. Pastore inspected the buoy's sinker on July 26 at 0600 hours, which was low tide, while COWSLIP serviced the buoy on July 20 around 1700 hours, which was approaching high tide. Accordingly, if at position W, the sinker was then in about 127 feet of water. The court found, in accordance with Lt. Hall's testimony, that the mooring chain was not taken up on a short stay. However, Lt. Hall testified that when a buoy is brought aboard for servicing, even though not on a short stay, the practice is to disconnect the chain and lay 55-60 feet ("roughly 60 feet") of chain on the deck. If on July 20 the sinker was already in position W at which Pastore found it, and one subtracts 127 feet from 175 feet of free chain, there are only 48 feet left, from which must be deducted whatever would be consumed by the COWSLIP's freeboard. On this basis, not only could normal procedure not have been followed without unwinding some of the turns from the sinker, but if even half the normal amount of chain were placed on the deck they would have had to have been on a short stay, which the court found they were not. The net effect of Pastore's testimony was not the fact credited by the court that he saw no indication of movement, but the conclusion that the sinker could not have been in the W position when the buoy was serviced on July 20. If that conclusion is not compelled, at the very least it fully offsets whatever persuasiveness there was in Pastore's failure to note signs on the bottom of recent movement. We add, as a final comment, that this persuasiveness impressed the plaintiffs themselves so little that their position in final argument was that the COWSLIP herself had moved the sinker on July 20.

An area most troublesome for the plaintiffs is the failure of the Pilots to have noticed Buoy 6's displacement

if, in fact, it was displaced prior to the casualty. This buoy was moved from its original station to C in 1967. It was repositioned there in October 1969. Three times thereafter, prior to July 20, 1972, this position was verified. Unless these prior verifications were incorrect, it had been at C for a long time. If, on the other hand, it was at W on July 22, but had moved there recently, it must have moved in some unaccountable fashion, this being summer and not a storm period. The court did not address itself specifically to these alternatives, but the tenor of its opinion assumes the error to be of long standing. The government asks if Buoy 6 was, in fact, off station, how it could be that the Pilots, with their constant use of the Sound, had never noticed it. Plaintiffs themselves conceded the general principle. In oral argument below, while asserting they were not obligated to do so, the Pilots agreed that "[i]f they see a buoy that looks wrong to them, they report it immediately." In response to the court's inquiry how Pilots had failed, previously to the night in question, to see that the buoy was wrongly positioned, counsel stated, "First of all, there is no evidence here as far as I am concerned that the COWSLIP didn't do something to move that buoy off station when it was out there." The court, however, found that the buoy was not so moved.¹⁷

¹⁷ This finding was not only not clearly wrong, but we would think, clearly correct. However incompetent were COWSLIP's officers at taking cross-bearings, we cannot believe they could unintentionally drag the sinker, a 4-ton cement block, 215 feet, or not be aware of doing so. Moreover, unlike the sudden force of being struck by the TAMANO's wake, we cannot visualize how such dragging could have rolled the block over, leaving it upside down with three loops of chain wound around it. The thought that the COWSLIP moved the sinker, contrary to the testimony of her officers, came from counsel, only, and was warrantably rejected.

Nor, if the buoy had been moved before then, was counsel's reply an answer addressed to the question why this had not been observed. Rather than a "first-of-all" answer, it was none.

Counsel's second reason was that correction was the government's responsibility, not the Pilots'. Conceding this to be legally so, it did not explain how the Pilots, in their own interests, could have failed to notice the displacement. Buoy 6 was the focal point of the turn which was, by common agreement, the most critical part of the passage. Portland Pilots were so conscious of its importance that they had sought the change from its pre-1967 location in precise terms, viz., easterly, 150 feet. Buoys 6 and 7 were the signposts and gateposts,¹⁸ of the channel. A 215 foot southeasterly change from Buoy 6's new position, if effected, would have been a second 150 foot movement easterly, when the first had been determined to be the maximum permissible, and 150 feet southerly, increasing its distance from Buoy 7 by over 15%. If a 150 foot easterly movement effected an appreciable change in the curve, a second 150 feet would also seem appreciable.

The court found that "even in the daytime the pilot relies almost exclusively upon Buoys No. 3, No. 6 and No. 7." At the same time, a pilot is constantly checking. Taking Captain Dunbar's testimony itself, it is almost impossible to think that a discrepancy of this amount, in a relatively narrow passage, could have been long overlooked.

"There are some that you see and we are always continually looking for objects along our course or something that when we pass abeam of a buoy goes in back or a lighthouse goes in back, you see the rela-

¹⁸ As previously noted, Buoy 6 is a gatepost at the extreme edge.

tionship of how they move, and this is true going through Hussey Sound during the daytime; . . ."

"[T]he chart is in your head."

"[Y]ou just contact all this information and it goes subconscious It's amazing how you can spot something different whether it's been a week since you piloted or if you have been on a vacation and you get two or three weeks off, you . . . can pick out something that's happened, that's different."

Captain Dunbar's articulation of his intimate, and graphic, knowledge was not matched by an explanation why it would not have led him to detect a mispositioning of a vital mark so substantial in extent that it caused a grounding. He had been through the Sound over 100 times. The Pilots had averaged a trip a week during 1972. It is no wonder that plaintiffs attempted the answer that the change had occurred since their last passage.

The court did not address itself to the question how the displacement that it found could have escaped the prior attention of the Pilots. It started to discuss it, but then, instead, proceeded to deal with plaintiff's testimony to the effect that the mispositioning would not have been readily discoverable that night.

"Of particular significance, Buoy No. 7 was moved to a position about 175 feet to the Northwest of its charted position, which materially changed its orientation with respect to Buoy No. 6 and was undoubtedly the reason Captain Dunbar did not detect that Buoy No. 6 was off-station."

"The evidence . . . abundantly supports the conclusion that it was the Coast Guard's misplacement of Buoy No. 7 which changed the pilot's perspective and caused

Captain Dunbar to commence the starboard turn too soon, and thereby to graze the buoy."

There was no evidence of any kind that Buoy 7's mispositioning materially changed Captain Dunbar's perspective. The only source we find was counsel's argument. Captain Dunbar himself testified,

"The sole reason for the incident is the Soldier's Ledge Buoy No. 6 was off station."

Because Buoy 7 was a very considerable distance ahead, we believe its movement did not, in fact, "materially change its orientation" with respect to the TAMANO.¹⁹ But even had it done so, its change on July could in no manner explain why Buoy 6's earlier position, if erroneous, had not been noticed prior to that date. The court's apparent failure to realize that the COWSLIP's having moved Buoy 7 off station on July 20 could not affect the pre-July 20 situation is reflected, indeed, emphasized, by its next sentence, a total non sequitur.

"The misplacement of Buoy No. 7 also adequately explains the reason groundings had not occurred prior to July 20."²⁰

The court's only statement of any relevance to the period prior to July 20 is in its footnote 33. It there observed that previous passages of vessels of TAMANO's size might have successfully traversed the ledge because they might have occurred at the upper stages of the tide, when there

¹⁹ For what it is worth, we plotted this out on an enlarged scale, and agree that Buoy 7's misposition was not significant in the present context. If we have done this correctly, the change would appear to have affected its bow bearing, as seen from where Captain Dunbar commenced his turn, by only one degree.

would have been clearance. While we think a better reason is that no careful pilot would have been there at any stage of the tide, all that this could explain is why the Pilots might not have learned of a mispositioning the hard way, not why they would not have noticed the buoy's displacement by visual observations conducted as part of their duty. As to this, the record offers no answer. This was not because they did not know how to supply an answer if there was one. See *Afran Transport Co. v. United States*, post, n.27, another COWSLIP case. Having in mind that plaintiffs had the burden of proof, their failure to explain either some cause of a recent movement, or why no one noticed a long-standing error, must weigh heavily against them.

Government Fault — Conclusion

In reviewing the decision of a court sitting without jury, the test is not whether there can be found "substantial evidence" supporting the conclusion. *Case v. Morrisette*, D.C.Cir., 1973, 475 F.2d 1300, 1307 n.35; *Jackson v. Hartford Accident & Indemn. Co.*, 8 Cir., 1970, 422 F.2d 1272, 1275 (Lay, J., concurring), cert. denied, 400 U.S. 855; *Manning v. Gagne*, 1 Cir., 1939, 108 F.2d 718. Rather, the question is whether, on the record as a whole, the appellate court views the conclusion as clearly erroneous, viz., "when, although there is evidence to support it, the reviewing court on the entire evidence is left with the definite and firm conviction that a mistake has been committed." *United States v. Gypsum Co.*, 1948, 333 U.S. 364, 395. In the present case we have less than our usual hesitation in so finding because much of the court's underlying reasoning and important subsidiary findings are demonstrably mistaken. One of the primary reasons for F.R.Civ.P.

52(a)'s requirement that the court's findings be recited is to facilitate appellate review by making it clear how it reached its result. *Lemelson v. Kellogg Co.*, 2 Cir., 1971, 440 F.2d 986, 988; 9 Wright & Miller, Federal Practice & Procedure § 2571. Just as a conclusion not accompanied by subsidiary factfindings adequate to indicate how it was reached may be vulnerable, *Fehringer v. Bluebeard's Castle, Inc.*, 3 Cir., 1968, 395 F.2d 851; see *Featherstone v. Barash*, 10 Cir., 1965, 345 F.2d 246, 249-50; *Lemelson v. Kellogg Co.*, ante, one in substantial measure supported by unwarranted findings is less entitled to weight, cf. *United States v. Jobin*, 1 Cir., 1976, 535 F.2d 154, 157 & n.5.

The burden was on the plaintiffs. Of all the circumstances relied on by the court, only two support them. One is the fact that the buoy was found off station after the accident. The only real impeachment of the answering testimony, however, was the court's finding of the distance the buoy was away from the ship at the time it passed the bridge. We have pointed out the weakness of its finding a certain omission in Dr. Breslin's opinion to be the "most serious flaw"—an omission that was, in fact, of no relevance whatever. The other circumstance was the lack of substantial damage to the buoy. While to a layman this might seem highly significant, it did not to qualified experts. Even the court, although denigrating their evidence by finding a nonexistent testimonial agreement, conceded the possibility of little damage, but thought the opposite was "far more likely." We cannot give such weight to a naval architect's expectation of certain destruction in the face of the three experienced government navigational experts, and the silence of plaintiffs'. Neither in this court, nor in the court below, have plaintiffs responded, even

through their resourceful counsel, to the silence of the Pilots themselves, who are faced not with a hypothetical, but the hard reality of a vital mark about which they did not complain. We are here reminded of Sherlock Holmes' dog in the nighttime, the significance of which was that he did not bark.²⁰ Above all this stands the clear and inherently credible testimony of the eyewitness Hanssen. Viewing the record as a whole, and plaintiffs' obligation to prove their case by a preponderance of the evidence, we hold the finding that the buoy was misplaced was clearly erroneous, and cannot stand.

Navigational Negligence.

Both because of its indirect bearing on plaintiffs' claim that the casualty was the government's fault, and because of its relevance to the government's counterclaim, post, we deal with Captain Dunbar's procedure. The court found that it was

"his intention . . . to clear the buoy by at least five feet."²¹

²¹ Captain Dunbar testified, without contravention, that it was customary for the pilot to 'hug' Buoy 6 when entering the Hussey on an ebb tide in order to avoid grounding on Peaks Island."

We take this to mean that he intended to be not significantly further away, or the specification of such small footage would seem meaningless. At oral argument plaintiffs' counsel felt he testified in terms of intending 20-25 feet.

²⁰ A. Conan Doyle, *Silver Blaze*, "Before deciding that question [whether there had been an intruder] I had grasped the significance of the silence of the dog, for one true inference invariably suggests others. . . ."

In point of fact, he gave no figure, but simply stated an intention to pass "close."²¹ He did state (erroneously) that, in fact, he came no closer than five feet, which may have left the court with the impression that this was his original purpose. But whether such proximity was intended or unintended, we find he was at fault.²²

It was, of course, essential, to avoid being carried by the tide onto Peaks Island. However, the channel, even between 10 fathom contours, was 300 yards wide. Rather than the "tight turn" before the Pilots induced the Coast Guard to move the Soldier Ledge buoy in 1967, it presented, in Captain Dunbar's words, a "long, slow swing,"

²¹ Interestingly enough, Captain Dunbar's sole use of the word "hug" was with reference to Eastern Approach Buoy 1, which he translated as meaning 3/10's of a mile. His concepts of distances, as demonstrated elsewhere in his testimony, seem extraordinarily elastic. So does his concept of bearings. Q. "[W]hat do you consider to be fine on the starboard bow? A. "Four degrees off the starboard bow, perhaps, . . . —it might be a point [11½°] It's going to vary. If it was eleven degrees, it might go to twelve. It might do down to ten, but you are trying to keep a nice even turn and keep that buoy fine on your starboard bow. That's why I think it is fair to say 'fine' rather than the actual degrees." Captain Dunbar willingly accepted the description of this being navigation "by the seat of your pants." We are tempted to observe that at least by hindsight, there seems much to be said for the government experts who testified he should have been maintaining a radar check as well.

²² We need not determine whether the establishment of the appropriate standard of care is to be included within the ordinary rule that findings in negligence cases fall within the clear error rule, *McAllister v. United States*, 1954, 348 U.S. 19; 9 Wright & Miller, *Federal Practice & Procedure* § 2590, or is not, *Mamiye Bros. v. Barber Steamship Lines, Inc.*, 1966, 360 F.2d 774, 776, cert. denied, 385 U.S. 835; cf. *Pacific Tow Boat Co. v. States Marine Corp.*, 9 Cir., 1960, 276 F.2d 745, 752. Even if within the clear error rule, the establishment of the standard of care is a sufficiently legal, as opposed to factual, matter that we would be more willing than ordinary to find clear error. Whichever rule applies, we cannot accept the district court's exoneration.

a "long, gradual swing." No witness, including Captain Dunbar, testified why it should be necessary to "hug" the buoy with such proximity, particularly a buoy on a line that passed, literally, within feet of a submerged and dangerous ledge. Particularly, too, at night, with a ship so large that the pilot stood over 200 yards from the bow, a bow which the court found, because of its flare, would conceal the buoy altogether on the last of the approach. The buoy itself was all there was to go by. The seriousness of its final occlusion was demonstrated by the fact that the ship's captain and first officer, although in their consular declaration they had felt that they "were getting too close," and "passing too close," to the buoy were, like Captain Dunbar himself, not aware that they had collided with it. Even so, there was marked concern on the bridge that their proximity risked fouling the propeller. Captain Bjornnes, for example, testified he "rushed out."

Like the government witnesses, and in the absence of any explanation, we see no possible purpose to be served by approaching so close. One must wonder what, viewed a priori, Captain Dunbar intended to do after he had brought his bow to within feet of the buoy, if that was his intent. Assuming his capability of maneuvering his bow with such accuracy, he still had the stern to contend with, and the danger of fouling. With the bow that close, he faced two alternatives: in order to keep his stern clear of the buoy and its mooring chain, he must continue to run straight as a die, in addition to stopping his engines as the buoy passed that same few feet from his stern, or he must continue a starboard (easterly) turn to swing his stern away from the buoy. The latter would mean, since a ship pivots, swinging his bow in further towards the

ledge when the buoy was already, at the Pilots' 1967 request, "every foot" as far east as it could go. In spite of the court's finding, we must greatly doubt that such closeness was Captain Dunbar's original intention. But, conversely, if it was not his intention, to have maintained his curve towards the buoy, and not straighten out until he struck it, can only reflect on his eyeballing capacity, or on his use of it. However one looks at it, he was guilty of a gross fault.

Instead of finding it a fault, the court found Captain Dunbar's hugging "customary" "without contravention." Holding up against the ebb tide was customary, but Captain Dunbar markedly overdid it.²³ The court's finding

²³ We cannot, by any possibility, share the district court's feeling that, with a channel that wide, to come within 22 feet of a crippling ledge is to "pass well to the west and clear." For a ship of this size, that would seem hairbreadth measurement. Moreover, 22 feet clearance on this occasion might not be 22 feet on another. The courts finding was based on Wright's estimate of where the buoy would have been two hours before low water with the sinker at its charted position, and travel of the buoy along the surface from the sinker of about 95 feet. This assumption was based on observations of the buoy when the sinker was in 120 feet of water, and thus did not take into account the greater travel there would be when the sinker was in its charted position of only 73 feet of water. Moreover, it was based on observations at a time when the chain was wrapped around the sinker three times; obviously, if the full 240 feet of chain were free, the buoy's travel along the surface could be much greater. Captain Dunbar had no idea of the buoy's circle of travel. In his pretrial deposition he estimated a 50 foot radius. At trial he said 75 feet maximum. Obviously it was more. The Pilots' failure to make inquiry of the Coast Guard of the chain's length until after the casualty seems a sad commentary. It was the Pilots' duty to have, at their fingertips, all information of any pertinency to their procedure. *Essex County Elec. Co. v. M/V GODAFOSS*, D.Mass., 1955, 129 F.Supp. 657. The alternatives are that Captain Dunbar was inexcusably uninformed, or this information was not considered relevant because no one intended ever to be close enough to the buoy to make it so. The captain is on one horn of a dilemma, or the other.

overlooked the declaration opinions of the ship's officers that they were too close. More serious, it overlooked the testimony of two government experts, who stated that proper procedure called for clearing this buoy by 100 feet or more. While it is true that one government witness conceded that special circumstances might justify approaching buoys to within 25-50 feet, with a channel that wide no one testified to such circumstances, and this witness expressly denied them. Rather than "customary" "without contravention," the evidence was precisely the opposite. The only commendation of Captain Dunbar, unless one so reads Captain Bjornes' deposition,²⁴ came, once again, from counsel.²⁵

On this basis, even if the buoy was mispositioned, an, if not the, operative fault was Captain Dunbar's. In charge of a bow over 200 yards away from him, affected by a current which he agreed he could not precisely estimate, he steamed by his own observation, whether intentionally or not, to within a few feet of a buoy known to be almost on top of an invisible ledge. The Peaks Island shoals for which he professed apprehension were 300 yards (less the ship's beam) distant. Even if the buoy were in position W, if he had straightened out in time to keep the 25-50

²⁴ Although in his declaration five days after the event Captain Bjornes stated they were passing two fathoms from the buoy and that he considered it "too close," in his later deposition, introduced at the trial, his "best estimate" was "Two, three, four fathoms." "18 or 24 feet, about. I considered it a safe distance." Since still at deposition time he admitted he had been afraid "about getting hung up in the mooring of the buoy," one may suspect that the volunteered opinion that he "considered it safe" may have been a re-consideration based on a later appreciation of the damaging effect of the declaration. In any event, even it was short of a ringing endorsement.

²⁵ "There wasn't one of those four witnesses that could find anything wrong with Captain Dunbar's navigation."

feet away that one of the government witnesses conceded could be an appropriate minimum in exigent circumstances, there would have been no grounding.

In oral argument plaintiffs attempted to lay the blame for Captain Dunbar's striking the buoy upon the turn that he was caused to make because of the buoy's mispositioning.

"Once you start that turn, which I say was triggered because of the angle between Buoy 6 and Buoy 7 was wrong, because they were off station, there was no way to correct it, and I think the United States' experts in the evidence have agreed with this."

The court, in its opinion, responded,

"[T]he expert navigational witnesses agree that once the Tamano was committed to the starboard turn, contact with the buoy was inevitable."

The turn, in other words, committed her to proceed inevitably, like a train on a track. There was no such testimony, let alone an agreement. The evidence was that there had to be a carefully taken curve; there was none that it had to be exact, or persisted in until a buoy, in plain sight, was run down. The court's finding shows not only a misreading of the record, but a serious misconception of piloting procedure.

In the first place, to determine an exact course in advance one must know the point of departure. Captain Dunbar did not know, and never planned to know, with precision, where he started his turn. He made no attempt to fix the distance the ship passed abeam of Buoy 3. Nor did he attempt to measure his speed, and he denied confidence in the exact amount of current across his course.

In these circumstances, even had he known his original distance from Buoy 3, after running "about four minutes" he was necessarily in a gray area in which he could not locate himself without measurements, none of which he made. Even had he done so, we may wonder how it would have enabled him to determine in advance an exact curve that would hug a distant buoy by clearing it by a few feet.

Captain Dunbar's procedure was quite different. Without concern for his precise point of departure, he set his course "fine by the buoy," using "ten or fifteen or twenty degrees right rudder" to "maintain a constant fine bearing," a procedure which, if he meant "constant" literally, meant increasing the curve as he proceeded. *See* n.8, ante. This procedure was not dependent upon the exact point at which he commenced his curve. Nor was he on an "inevitable" track. Rather, during these three minutes the ship's course was determined by his periodic instructions. Speaking with reference to this very passage, his companion pilot, Captain Ferguson, put it clearly. "Due to Captain Dunbar's orders, the vessel doesn't stay on a perfect track line; it moves back and forth." *See also*, n.21, ante. Captain Dunbar obviously intended, at some point, to terminate his curve towards the buoy and straighten out. His error, although the buoy was fully visible—First Officer Storheil testified that even before the start of the turn he could see the buoy itself, not merely the flash, and Captain Dunbar testified that by his "eyeballing" he could tell its distance more accurately than by radar—was that he failed to do so soon enough. No witness testified that anything in the original turn obligated this persistence, let alone that contact was inevitable. Plaintiffs point to testimony that a turn started too soon would lead closer to

the buoy. Without pausing here to analyze just what this meant, it was not a statement that one was committed not to desist before the closeness of a seen object became too close.²⁶

Quite apart from striking the buoy, by his own interpretation of his distance away, Captain Dunbar came too close. On the record, we see no excuse. We cannot accept the court's finding that Captain Dunbar was not negligent; the contrary was established.

The TAMANO's Premature Entry into Hussey Sound.

Looking at the total picture rather than the individually discussed parts, the TAMANO came through a channel 300 yards wide, struck a lighted buoy on the outer edge known to be every foot as close as possible to a submerged ledge, and walked away from the consequent environmental destruction by saying that the buoy must have been misplaced. Buoys do get misplaced, and regrettable as it is that the Coast Guard should man a buoy tender with unqualified personnel, human error will always be with us. *See* n.1, ante. Every nautical publication emphasizes the dangers of total dependence upon floating aids.²⁷ At one point in his testimony Captain Dunbar stated,

²⁶ We may add our own observation, that turning too soon would seem a false issue. Starting too soon must mean too soon with relation to the buoy's position off the bow. This is not what Captain Dunbar did. On the contrary, it was because the angle had already, though unexpectedly, opened up to the point of dictating the turn that he took it, not too soon, but "seconds after I thought I should have."

²⁷ If *Afran Transport Co. v. United States*, 2 Cir., 1970, 435 F.2d 213, cert. denied, 404 U.S. 872, is to be read to the contrary, we do not agree with it. However, *Afran* is notable in that the plaintiff in that instance offered extensive testimony why the misplacement of the buoy there involved was not easily verifiable by a pilot.

Q. "[D]id you in fact rely strictly on those three buoys?"

A. "Yes. There's nothing else there to rely on. . . . [A]t night, one o'clock in the morning . . . there are no shore lights, there are no spires on [sic] houses with which one can see. It's like going through the inside of a black cat. You have three buoys and that's it. . . . [If you have a shoreline available] [t]hat makes it a heck of a lot easier during the daytime, yes, but it is not possible at night."²⁸

In this circumstance the government argues that it was negligence on the part of the ship, as well as by Captain Dunbar, to have entered at night when, by waiting a few hours outside, which Captain Bjornnes testified he would have been willing to do because he could not discharge for another 24 hours, not only would they have had daylight, but the ledge itself would have been sufficiently covered to remove the danger. In view of the enormous capability of harm in case of miscarriage, as this case demonstrated with only a partial spill, we see much merit in this claim. *Urie v. Thompson*, 1949, 337 U.S. 163, 179; *United States v. Carroll*, 2 Cir., 1947, 159 F.2d 169, 173; Restatement (Second) of Torts, § 298 (1965); W. Prosser, *The Law of Torts*, § 31 (4th ed. 1971). It was no sufficient answer

²⁸ Realizing the import of this concession a bit late, Captain Dunbar sought to back away by saying,

"During the day, there are certain advantages to seeing. Your distance perception obviously is better, but during the day often other things interfere with it, so it is give or take whether night navigation is better than day navigation."

One may question, however, the extent he would have admitted to the Board of Examiners that objects observed during the daytime interfered with his navigation.

that it was customary to enter at night, and that the Coast Guard had not forbidden it. *Texas & Pac. Ry. v. Behymer*, 1903, 189 U.S. 468, 470; *The T. J. Hooper*, 2 Cir., 1932, 60 F.2d 737, 740 (L.Hand, J.), *cert. denied*, 287 U.S. 662; Restatement, ante, § 33; Prosser, ante, § 33. Our rulings in other matters, however, make it unnecessary to pursue this question, except to observe that the court's treatment was overlight.

The Government's Claim for Cleanup Costs.

The court's finding the government solely responsible for the oil spill defeated the government's counterclaim under 33 U.S.C. § 1321 (f)(1),²⁹ formerly section 1161 (f)(1), for certain cleanup costs that it had incurred pursuant to section 1321 (d). Our reversal establishes this claim, unless Captain Dunbar, as a compulsory pilot, is to be regarded as a "third party."

Within specified monetary limits a vessel discharging oil in violation of section 1321 (b)(3) and her owners are liable without fault for the government's cleanup costs,

²⁹ Section 1321 (f)(1) reads in relevant part,

"Except where an owner or operator can prove that a discharge was caused solely by (A) an act of God, (B) an act of war, (C) negligence on the part of the United States Government, or (D) an act or omission of a third party without regard to whether any such act or omission was or was not negligent, or any combination of the foregoing clauses, such owner or operator of any vessel from which oil or a hazardous substance is discharged in violation of subsection (b)(3) of this section shall, notwithstanding any other provision of law, be liable to the United States Government for the actual costs incurred. . . . Such costs shall constitute a maritime lien on such vessel which may be recovered in an action in rem in the district court of the United States for any district within which any vessel may be found. The United States may also bring an action against the owner or operator of such vessel in any court of competent jurisdiction to recover such costs."

with certain exceptions, the last being the act of a "third party." While, in collision cases, any pilot is an agent of the ship, *The China*, 1869, 7 Wall. (74 U.S.) 53, a distinction exempting the owners has been drawn in the case of compulsory pilots. *Homer Ramsdell Trans. Co. v. La Compagnie Generale Transatlantique*, 1900, 182 U.S. 406; *People of California v. Italian Motorship Ilice*, 9 Cir., 1976, 534 F.2d 836. The owners here, accordingly, urge that even though Captain Dunbar was not a third party as to the ship, he was with respect to them. We do not so construe the statute.

There appears to be no specifically significant legislative history, other than a change from a House version based on fault to a Senate version in the direction of strict liability. H.R.Rep. No. 127, 91st Cong., 1st Sess. (1969); S.Rep. No. 351, 91st Cong., 1st Sess. (1969); Conf. Rep. No. 940, 91st Cong., 2d Sess. (1970), but this change itself indicates that unless the exceptions are narrowly construed, the legislative purpose would be largely vitiated. The first three exceptions, "(A) an act of God, (B) an act of war, (C) negligence on the part of the United States Government," (which, individually or collectively, must be "solely" responsible) are manifestly addressed to actions entirely outside the ship, or in the case of actors, to strangers. We read the final exception, "(D) an act or omission of a third party without regard to whether such an act or omission was or was not negligent," correspondingly. To take a simple example, if a vandal opened a ship's valve, this would be an act of a third party. However, if the valve failed because of an act of the installer, the owners should not be permitted to avoid liability by claiming that the installer was a third party because he was an independent contractor rather than an employee. The installer acts for

the ship. Equally, though a compulsory pilot might be regarded as an independent contractor, he is at all times subject to the ultimate control of the ship's master. *The China*, ante, at 67-68. The owners lament that they were legally forced to take Captain Dunbar (although it is clear on the evidence that they would have taken a pilot in any event). So, too, they may have been forced by practical necessities to hire the particular shipyard that installed the defective valve. We agree with the government that they must take the ports they select as they find them.

Rather than indicating a desire to recognize a distinction between the ship and her owners, section 1321 (f)(1), providing for liability of the owners, in no way indicates a desire to recognize any distinction between the ship and her owners. If they were not coextensive, we would have the singular result that if a spill were caused by a state-licensed pilot who was voluntarily taken, the owners must pay their cleanup costs, and the government's, section 1321 (i)(1), 1321 (f)(1). If the state, however, in addition to licensing, made pilotage compulsory, and the pilot, as against the owners, were a "third party," the government would have to pay both costs, *id.*, but, at the same time, under section 1321 (f)(1) would appear to have a lien against the ship.

We can not believe that Congress had any such intent. Nor, under the circumstances, need we consider the government's claim that Captain Dunbar was not, in fact, a compulsory pilot. *The Merrimac*, 1872, 14 Wall. (81 U.S.) 199; Me.Rev.Stat., Tit. 38, § 82 (1964); 1927 Me.Act. Ch. 24, § 10. That such great consequences should turn upon the obligation to pay a pilotage fee, unaccompanied by any obligation to accept the services, would seem to us anomalous, at best. The owners must be held accountable.

No contention is made that the TAMANO herself is not liable for cleanup costs, but whether we have jurisdiction to render judgment raises a possible question. The ship was attached by other plaintiffs in a companion action, but was not attached by the United States, and has left the country. However, claims were filed in the district court on her behalf against the United States, which submitted the subject matter of the government's in rem counterclaim to the court's jurisdiction. *The Gloria*, S.D.N.Y., 1919, 267 F. 929; *The Toledo*, E.D.Mich., 1973, 23 Fed. Cas. 1355, No. 14,077. We see no more reason for litigation to be a one-way street for a "personified" ship, see *Afran Transport Co. v. S.S. Transcolorado*, 5 Cir., 1972, 468 F.2d 772, 774, than for any other party. Cf. *Adam v. Saenger*, 1938, 303 U.S. 59, 67-68; *Washington-Southern Nav. Co. v. Baltimore & Philadelphia Steamboat Co.*, 1924, 263 U.S. 629, 637.

The Federal Rules of Civil Procedure bolster our conclusion. Rule 1 includes "cases at law or in equity, or in admiralty" within the scope of the rules. Under Rule 13 parties may bring counterclaims against opposing parties. The Supplementary Rules for Certain Admiralty and Maritime Claims (Supplementary Rules) apply to actions in rem. Supplementary Rules A(2). These rules set special provisions to govern amenability to suit of in rem claimants. Supplementary Rule E(8) does permit, in certain circumstances, restricted appearances to defend against in rem claims, but this rule does not give the same privilege to in rem plaintiffs. The Advisory Committee Notes to Supplementary Rule E(8) makes clear that this rule is the drafters' response to the general liberal joinder rules. The narrow defendants' privilege is to protect them from

being submitted to an in personam jurisdiction over non-maritime claims. This policy of fairness does not apply to those bringing claims.

With regard to Captain Dunbar and his employer, Portland Pilots, Inc., the statute, at least arguably, makes no provision for the liability of the ship's agent who caused the spill. Such omission would not help them. We do not believe that the statute was intended to revoke the principles of maritime torts. Cf. *State of California v. S.S. Bournemouth*, C.D.Cal., 1969, 307 F.Supp. 922. Liability of the ship in rem does not release the pilot from the consequences of his own negligence, *People of California v. Italian Motorship Ilice*, 9 Cir., 1976, 534 F.2d 836; *Gray v. Johansson*, 5 Cir., 1961, 287 F.2d 852, cert. denied, 368 U.S. 835, although we note here that while under the statute the government's actual costs are the measure, on a maritime tort theory the burden would be on the government to show that its costs were reasonable.

The liability findings and judgments of the district court are vacated. The cause is remanded to that court to dismiss the proceedings against the United States and to determine the cleanup costs incurred by the United States as herein defined, and to enter judgments therefor against the TAMANO, her owners, Portland Pilots, Inc., and Captain Dunbar.

APPENDIX C

UNITED STATES COURT OF APPEALS

FOR THE FIRST CIRCUIT

76-1020

ERNEST E. BURGESS *et al.*,
Plaintiffs, Appellees,

—v.—

M/V TAMANO *et al.*,
Defendants, Appellees.

UNITED STATES OF AMERICA,
Appellant.

APPEAL FROM THE UNITED STATES DISTRICT COURT
 FOR THE DISTRICT OF MAINE

[HON. EDWARD T. GIGNOUX, *U.S. District Judge.*]

Before COFFIN, *Chief Judge,*
 ALDRICH and CAMPBELL, *Circuit Judges.*

MEMORANDUM AND ORDER ON PETITION
 FOR REHEARING

October 4, 1977

Court. Plaintiffs have filed a Petition for Rehearing, listing six points. Since we find no merit in any, we address them only in summary form.

Point I. The new claim, that Dr. Breslin's opinion was not merely speculative, but impossible, is entirely inappropriate to a petition for rehearing, which, as plaintiffs recognize in their introduction, is restricted to responding to something in the court's opinion that was unanticipated, or, rather, not reasonably anticipatable. That is not the case here; with regard to Dr. Breslin we raised nothing new.¹ Point I is pure afterthought, and too late.

In view of this fatal defect, we need spend no time on the substance of plaintiffs' argument. However, we do remark that, like counsel's post-trial "persuasive demonstration," the present claim, and counsel's supporting diagram, are another exercise in imagination and contrary to the evidence. The evidence was that, with the ebbing tide, the mooring chain extends along the bottom in the direction of the current until it rises in a catenary curve. The 94-foot excursion of the buoy from the sinker, on which plaintiffs' present argument depends, comes from surveyor Wright's observation of the buoy's post-occurrence position when the sinker was in 120 feet of water and the chain reduced in length to 175 feet. The purpose of this testimony was to show how far the buoy was from its charted position if its movement had preceded TAMANO's arrival. It could not, and did not purport to, show what would have been the excursion had the sinker been in 77 feet of water and with the chain free for its entire length of 240 feet. Less depth, and a longer chain, would result in

¹ We did add that the buoy moved in "precisely the direction that Dr. Breslin's hypothesis called for." Plaintiffs point out that Dr. Breslin testified only in a generality. That is true. The buoy moved precisely within that generality.

an appreciably longer scope, upon which the current would act to produce a longer excursion from the sinker. Plaintiffs cannot hypothesize by combining the shorter excursion with the lesser depth and longer chain. Nor can they invalidate Dr. Breslin's opinion by the fact that government counsel used Wright's figure in questioning another witness. We can only repeat what we said in our opinion as to Dr. Breslin's analysis.

"If plaintiffs' expert, Professor Hamilton, could quarrel with Dr. Breslin's opinion of the force upon, and the consequences of the wake to, a buoy that was caught up in it, we may be sure he would do so. He made no attempt to."

This is but another case of an imperfect fit between the evidence and counsel's post hoc theorizing.²

Point II. With respect to our finding that Captain Dunbar's mental time clock was improperly programmed, we did not "rationalize" on the basis of a predetermined conclusion, but took unambiguous testimony. Plaintiffs' complaint is not persuasive, or even responsive.

Point III. Plaintiffs are correct, on the evidence, in saying that the annual servicing of Buoy 6, if performed, would require one to three hours, and that the district court found that the COWSLIP's stay was "approximately one half hour." They could have added that the service sheet itself shows 5/10ths hours. They continue, "COWSLIP's log shows that the only thing done to Buoy 6 on

² It is also counsel, only, who now advance the claim that the existence of what was apparently a wire shroud, found around the sinker, accounted for its movement. If there is any possible validity in this point, it should have been developed in the trial court.

July 20 was to renumber it." The log reads, "Renumbered Buoy Hussey Sound LB 6 L/L 326.10." This is not a statement that renumbering was "the only thing." On its face, this is a casual log. There is no mention, for example, of renumbering Buoy 3, although, concededly, this was effected. The important matter is not what the log does not say, but what it does say. It recites the completion of servicing Buoy 7 at 1616; the stop at Buoy 6; a magazine systems test at 1740, and the commencement of servicing Buoy 3 at 1816. Quite apart from the question why Buoys 7 and 3 should be serviced and Buoy 6 not, one may ask what the tender was doing the balance of the time between 1616 and 1740 if she was but one half hour at Buoy 6.

The answer is in the service sheet. This shows that, in addition to being renumbered, the buoy was given its "Annual service." Hall testified that they were instructed to do this, and that they did so. The court twice found "servicing" of Buoy 6. To say, "Hall's testimony was . . . apparently rejected by the trial judge" simply because the court failed to note, and was misled by, a discrepancy in the entry under "Time spent on site," is an unwarranted attempt to ignore the court's express language.

Point IV. Plaintiffs' assertion which forms the basis of Point IV, that we found that "the cushioning, or side-sweeping effect of the bow wave, or pressure gradient" prevented the buoy from striking the bow and being damaged," is simply not so. Our opinion is replete with recognition of the striking, indeed, depends upon it. The phrase which plaintiffs quote referred to the testimony of the experts, who, in turn, recognized a striking, but stated that the pressure gradient could have cushioned, viz., reduced, the force of the impact.

After misstating what we said, counsel continue to invent evidence, notably about the alleged effect of the bulbous bow for which we have already criticized them. Finally, they seemingly quote Professor Hamilin out of context, unless all they are saying is that we should have accepted his testimony as to damage to the buoy, a matter fully treated in our opinion, and as to which plaintiffs offer nothing new.

Point V. Plaintiffs also offer nothing new with respect to the weight that should be accorded to the viewing taken by the district judge of actual operations. This was argued before. We did consider it, but found it insufficient in light of all the evidence.

Point VI. This is not really a point, but a conclusory allegation. If we "tortured the record," plaintiffs have not shown where we did so. Particularly we express wonderment that we are criticized for not "ignoring the testimony of Hanssen." (Last paragraph on page 2 of petition.) Counsel successfully persuaded the district court to ignore Hanssen's testimony by supplying a number of grounds, all of which we examined, discussed at length, and demonstrated to be unfounded. The petition conspicuously fails to fault that analysis. There is, accordingly, no reason to ignore Hanssen. Hanssen testified by deposition, plaintiffs cannot even claim that the district court might have discredited him by observing him in person. His testimony is part of the case, and is not to be ignored simply because plaintiffs find it unpalatable.

The petition for rehearing is denied.

By the Court,

/s/ DANA H. GALLUP
Clerk

APPENDIX D

Statutes and Rules

33 U.S.C.A. § 1321

• • • • •

Liability for actual costs of removal

(f) (1) Except where an owner or operator can prove that a discharge was caused solely by (A) an act of God, (B) an act of war, (C) negligence on the part of the United States Government, or (D) an act or omission of a third party without regard to whether any such act or omission was or was not negligent, or any combination of the foregoing clauses, such owner or operator of any vessel from which oil or a hazardous substance is discharged in violation of subsection (b) (3) of this section shall, notwithstanding any other provision of law, be liable to the United States Government for the actual costs incurred under subsection (c) of this section for the removal of such oil or substance by the United States Government in an amount not to exceed \$100 per gross ton of such vessel or \$14,000,000, whichever is lesser, except that where the United States can show that such discharge was the result of willful negligence or willful misconduct within the privity and knowledge of the owner, such owner or operator shall be liable to the United States Government for the full amount of such costs. Such costs shall constitute a maritime lien on such vessel which may be recovered in an action in rem in the district court of the United States for any district within which any vessel may be found. The United States may also bring

an action against the owner or operator of such vessel in any court of competent jurisdiction to recover such costs.

• • • • •

Recovery of removal costs

(i) (1) In any case where an owner or operator of a vessel or an onshore facility or an offshore facility from which oil or a hazardous substance is discharged in violation of subsection (b) (3) of this section acts to remove such oil or substance in accordance with regulations promulgated pursuant to this section, such owner or operator shall be entitled to recover the reasonable costs incurred in such removal upon establishing, in a suit which may be brought against the United States Government in the United States Court of Claims, that such discharge was caused solely by (A) an act of God, (B) an act of war, (C) negligence on the part of the United States Government, or (D) an act or omission of a third party without regard to whether such act or omission was or was not negligent, or of any combination of the foregoing causes.

• • • • •

Fed. Rules Civ. Proc., rule 52(a), 28 U.S.C.A.

Rule 52. Findings by the Court

(a) Effect. In all actions tried upon the facts without a jury or with an advisory jury, the court shall find the facts specially and state separately its conclusions of law thereon, and judgment shall be entered pursuant to Rule 58; and in granting or refusing interlocutory injunctions the court shall similarly set forth the findings of fact and conclusions of law which constitute the grounds of its action. Requests

for findings are not necessary for purposes of review. Findings of fact shall not be set aside unless clearly erroneous, and due regard shall be given to the opportunity of the trial court to judge of the credibility of the witnesses. The findings of a master, to the extent that the court adopts them, shall be considered as the findings of the court. If an opinion or memorandum of decision is filed, it will be sufficient if the findings of fact and conclusions of law appear therein. Findings of fact and conclusions of law are unnecessary on decisions of motions under Rules 12 or 56 or any other motion except as provided in Rule 41(b).

No. 77-674

Supreme Court, U. S.

FILED

MAR 9 1978

MICHAEL RUDAK, JR., CLERK

In the Supreme Court of the United States

OCTOBER TERM, 1977

M/V TAMANO, ET AL., PETITIONERS

v.

UNITED STATES OF AMERICA

**ON PETITION FOR A WRIT OF CERTIORARI TO
THE UNITED STATES COURT OF APPEALS FOR
THE FIRST CIRCUIT**

**MEMORANDUM FOR THE UNITED STATES
IN OPPOSITION**

**WADE H. MCCREE, JR.,
Solicitor General,
Department of Justice,
Washington, D.C. 20530.**

In the Supreme Court of the United States

OCTOBER TERM, 1977

No. 77-674

M/V TAMANO, ET AL., PETITIONERS

v.

UNITED STATES OF AMERICA

*ON PETITION FOR A WRIT OF CERTIORARI TO
THE UNITED STATES COURT OF APPEALS FOR
THE FIRST CIRCUIT*

**MEMORANDUM FOR THE UNITED STATES
IN OPPOSITION**

1. On July 22, 1972, the M/V TAMANO, a Norwegian oil supertanker, grazed a ledge in Hussey Sound, Casco Bay, Maine. As a result, 100,000 gallons of heavy oil were spilled into Casco Bay (Pet. App. 44a).

At the time of the collision, the TAMANO was piloted by Captain Charles Dunbar of Portland Pilots, Inc.¹ The incident resulted in numerous law suits. This case involves only the question of the liability for clean-up costs.

The district court entered a judgment against the United States, concluding that the accident had been caused by a negligently-placed buoy (Pet. App. 1a-42a). The court of appeals reversed, holding that the buoy was

¹Dunbar boarded the TAMANO at the Portland Lightship to act as pilot through the Sound.

on station and that the sole cause of the accident was negligent navigation by Dunbar (564 F. 2d 964; Pet. App. 43a-85a). It concluded that the district court's contrary findings were clearly erroneous. On petition for rehearing, the court of appeals wrote a brief opinion rejecting the argument that it had impermissibly substituted its judgment for that of the district court (Pet. App. 86a-90a).

2. The court of appeals exhaustively examined all the evidence in this case. Its conclusion that the findings of the district court were clearly erroneous is correct and based on the analysis of all evidence of record. We rely on its opinion. There is no reason for review by this Court, because the case involves only the application of settled principles to particular facts (see Pet. App. 70a-71a).

Petitioners say that the court of appeals reweighed the testimony of Bos'n Hanssen. But this testimony was before the court on deposition, and neither the district court nor the court of appeals resorted to assessments of demeanor. Moreover, the court of appeals correctly observed that the reasons given by the district court for rejecting this eyewitness testimony simply were not supported by the record (Pet. App. 48a-64a). Petitioners do not come to grips with the court of appeals' discussion. As the court of appeals wrote on denying rehearing (Pet. App. 90a): "Counsel successfully persuaded the district court to ignore Hanssen's testimony by supplying a number of grounds, all of which we examined, discussed at length, and demonstrated to be unfounded. The petition conspicuously fails to fault that analysis. There is, accordingly, no reason to ignore Hanssen."

The court of appeals also pointed out that, if the buoy had been misplaced, the pilots surely would have observed

the problem before the night of the accident (Pet. App. 67a; footnote omitted):

Buoy 6 [the buoy struck by the TAMANO] was the focal point of the turn which was, by common agreement, the most critical part of the passage. Portland Pilots were so conscious of its importance that they had sought the change from its pre-1967 location in precise terms, viz., easterly, 150 feet. Buoys 6 and 7 were the signposts and gateposts, of the channel. A 215 foot southeasterly change [two days before the collision] from Buoy 6's new position, if effected, would have been a second 150 foot movement easterly, when the first had been determined to be the maximum permissible, and 150 feet southerly, increasing its distance from Buoy 7 by 15%. If a 150 foot easterly movement effected an appreciable change in the curve, a second 150 feet would also seem appreciable.

3. The court of appeals also correctly rejected petitioners' contention that Dunbar, as a compulsory pilot, was a "third party" for whose negligence petitioners are not responsible under 33 U.S.C. (Supp. V) 1321(f)(1).² The court correctly stated that "unless the exceptions are narrowly construed, the legislative purpose would be largely vitiated" (Pet. App. 82a). No legislative history suggests that a pilot, in the ship's employ and having full control of the ship, can be deemed a "third party," in essence a stranger to the ship. The pilot is no more a third party than is the ship's captain. Someone must be in

²33 U.S.C. (Supp. V) 1321(f)(1) provides that a ship owner or operator is liable to the United States for the actual cost of removing a discharge of oil, unless the discharge was caused "solely by * * * an act or omission of a third party * * *."

charge of the ship at all times. At the time of the accident, Dunbar—a temporary employee—was in charge. The ship and its owners are therefore liable for the costs of cleaning up the oil.³

However that may be, no other court of appeals has considered this question. We have no reason to believe that accidents like the present one, caused by a pilot, occur frequently. There will be time enough for review by this Court if a conflict among the circuits should develop concerning liability under Section 1321(f)(1) for the pilot's negligence.

It is therefore respectfully submitted that the petition for a writ of certiorari should be denied.

WADE H. MCCREE, JR.,
Solicitor General.

MARCH 1978.

³It is an accepted principle of admiralty law that a vessel is responsible for harm caused by the negligence of a compulsory pilot. See *The China*, 7 Wall. 53. See generally Comment, *The Compulsory Pilot Defense: A Reexamination of Personification and Agency*, 42 U. Chi. L. Rev. 199 (1974). In the court of appeals, petitioners conceded that the TAMANO itself was responsible for cleanup costs (Pet. App. 82a). Although petitioners apparently seek to withdraw that concession (Pet. 8), it is too late to do. Because there is no contention that the cleanup costs exceed the value of the TAMANO, there is no reason to consider the allocation of personal liability for the excess.